WONDERLAND

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CUSTER'S LAST STAND

WONDERLAND

1901

BY

OLIN D. WHEELER

ILLUSTRATED

Descriptive of that portion of *The NORTHWEST* tributary to *The NORTHERN PACIFIC RAILWAY*, and particularly relating *The HISTORY of the UNIQUE TRADEMARK of The NORTHERN PACIFIC* and describing *YELLOWSTONE PARK* and *CUSTER BATTLEFIELD*

COPYRIGHT, 1901, BY
CHAS. S. FEE,
GENERAL PASSENGER AND TICKET AGENT
NORTHERN PACIFIC RAILWAY,
ST. PAUL, MINN.

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THE HISTORY OF A TRADE MARK

MANY have wondered whether the peculiar design used as a trade-mark by the Northern Pacific Railway Company was adopted by them in a haphazard manner, or whether a real significance attaches to it; whether it is simply an ingenious geometric device, or whether in its origin, meaning, and adoption there is hidden a story.

It is not a creature of accident — in the sense referred to — and there *is* a tale and history back of it.

It is not hard to relate its origin; it is easy to tell the story of its adoption; but when it comes to conveying to the general reader a clear idea of its original and ancient meaning, a somewhat difficult task confronts the relator, for reasons which will appear.

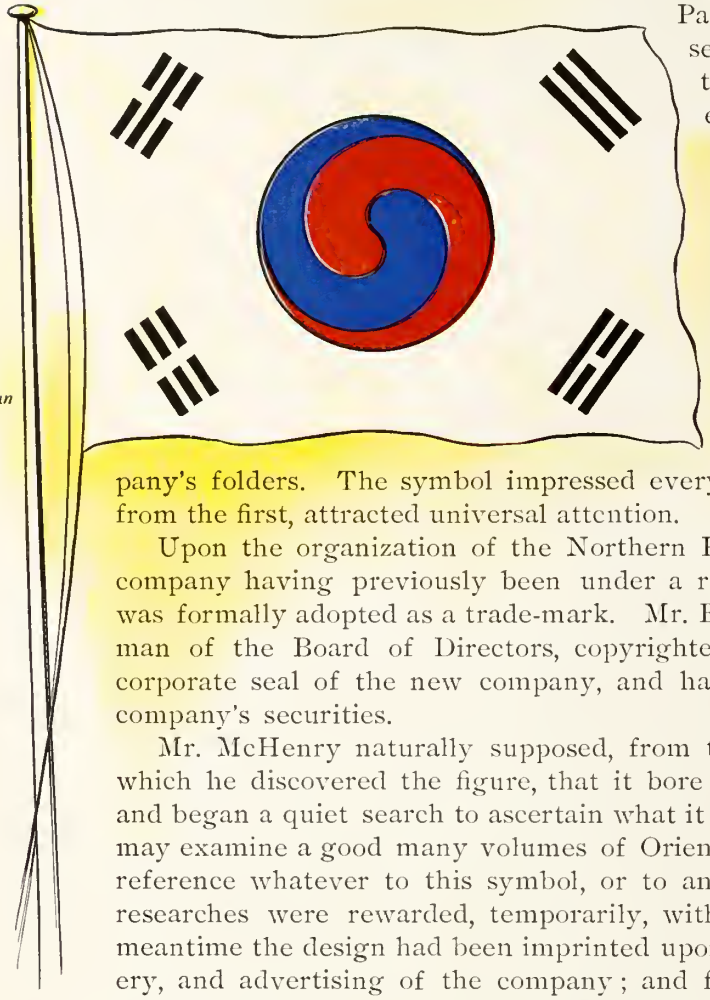
The original symbol, of which the trade-mark is an adaptation, is Chinese in invention. The diagram itself was evolved in the eleventh century A. D., but the ideas which it represents date back to more than 3,000 years before the Christ child was cradled in the manger at Bethlehem. It is really, therefore, more than 5,200 years old, and may, indeed, be much older. It is known as the Great Chinese Monad, or more commonly, perhaps, as the Diagram of the Great Extreme.

ITS ADOPTION.

The design was discovered and adapted to its present use in 1893. Mr. E. H. McHenry and Mr. Chas. S. Fee, then, as now, the Chief Engineer and General Passenger and Ticket Agent of the Company,

respectively, are principally to be credited with its discovery and adoption.

The Northern Pacific was in search of a trade-mark. Many designs had been considered and rejected. Mr. McHenry, while visiting the Korean exhibit at the World's Fair, was struck with a geometric design that appeared on the Korean flag. It was simple, yet effective — plain, yet striking. At once the idea came to him that it was just the symbol for the long-sought-for trade-mark. With but slight modification it lent itself readily to the purpose. After Mr. McHenry returned to St. Paul, Mr. Fee sent to him several designs bearing on the trade-mark idea, for elaboration in his drafting-room. Mr. McHenry added to them the Korean figure. Mr. Fee was at once impressed with this, added the words "Yellowstone Park Line," and sent the trade-mark forth into the world emblazoned upon the company's folders. The symbol impressed every one favorably, and has, from the first, attracted universal attention.



The Korean Flag.

Upon the organization of the Northern Pacific Railway — the old company having previously been under a receivership — the design was formally adopted as a trade-mark. Mr. Edward D. Adams, chairman of the Board of Directors, copyrighted it, adopted it for the corporate seal of the new company, and had it engraved upon the company's securities.

Mr. McHenry naturally supposed, from the circumstances under which he discovered the figure, that it bore an Oriental significance, and began a quiet search to ascertain what it was. As it happens, one may examine a good many volumes of Oriental lore and discover no reference whatever to this symbol, or to anything like it, and these researches were rewarded, temporarily, with little success. In the meantime the design had been imprinted upon the documents, stationery, and advertising of the company; and from the windows of its ticket offices in all the large cities between the Atlantic and the Pacific the unique device attracted the attention of the passer-by.

ITS HISTORY AND MEANING.

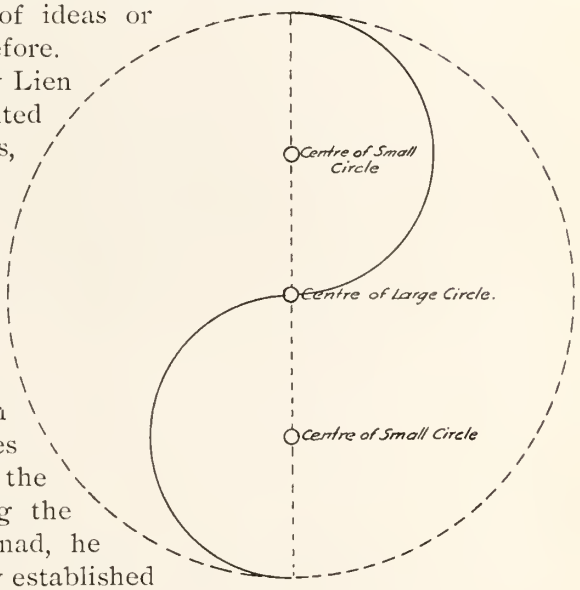
It may be that the fact that the trade-mark was first seen on the Korean flag diverted investigation, at the start, into rather unprodue-

tive channels. The symbol is not original, apparently, with the Koreans, but was appropriated by them from the Chinese.

The first authentic and definite information, in detail, relative to the Monad came from Rev. W. S. Holt, D. D., of Portland, Ore. Mr. Holt had been, for twelve years, a Presbyterian missionary in China, and was familiar with the symbol and its meaning there. As he was walking along the street he noticed the trade-mark painted upon the windows of the office of the company. It struck him as peculiar, and entering the office he made some inquiries, and then, in conversation with Mr. A. D. Charlton, Assistant General Passenger Agent, informed him of the general character and meaning of the design. Through Mr. Holt's efforts much additional information of value was secured, and now that a start was made in the right direction, investigation was also successfully pushed through other channels.

At first sight the figure appears to be rather an involved one. An analysis of it soon corrects this impression. It is really quite simple. On the vertical diameter of a circle, inscribe on opposite sides of this diameter and one above and one below the center thereof, semi-circles having diameters of one-half the larger diameter, or the radius of the large circle, and the symbol is outlined.

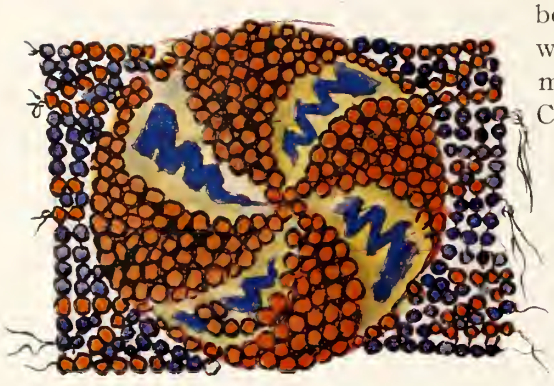
As previously stated, the symbol itself may be said to be an ideographic or pictographic representation of ideas or principles enunciated many centuries before.



In A. D. 1017 a young Chinaman, Chow Lien Ki, was born. As a young man he delighted in nature, and roamed the hills and dales, and to this we owe the existence of the trade-mark, and Chow Lien Ki the fame to which he attained.

One day in his rambling he found a cave. The cave ran through a hill and had an entrance on each side of it. Both entrances were double crescent shaped, but the cave itself was round as a moon inside. Out of these crescentic entrances and the moon-shaped cave he evolved the diagram that has become noted among the Chinese. This diagram, the Great Monad, he used to illustrate a system of philosophy established by Fuh Hi more than 3,000 years B. C., and, of course, 4,000 years before Chow found his wonderful cave.

From the mysteries of an ancient Chinese philosophy it has now been dragged forth to illustrate the modern American system of transportation. It has, so to speak, leaped across a gulf of nine centuries,



Sample of Bead Work of American Plains Indians, exhibiting crude resemblance to Monad and Tah Gook.

become a modern invention, as it were, and now does duty as the trade-mark of the Northern Pacific Railway Company.

But what was the strange philosophy that such a symbol was designed to illustrate, and how did it illustrate it?

This involves a plunge into the sea of metaphysics, from which let us hope to emerge "clothed and in our right minds."

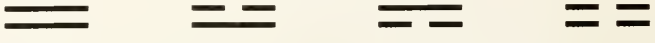
We can hardly explain the ratiocinations of this young Chinaman's mind by which he came to believe that the figure really did represent what he intended it should, but we can at least try to state the case as lucidly as it will allow, and let the reader draw his own conclusion. It will be noticed that, however much the Chinese may deserve to be called heathen, they could, even in Fuh Hi's time, hold their own in abstruse speculation. Rev. Dr. W. A. P. Martin, evidently a close student and an authority on things Chinese, observes in his "The Chinese" (p. 277) that the Jesuits long ago pointed out that the only way in which Europeans could claim preëminence over the Chinese was in their mathematical knowledge and "the verities of the Christian faith."

Design found on Pueblo (Zuni) Indian Pottery, resembling Tah Gook.

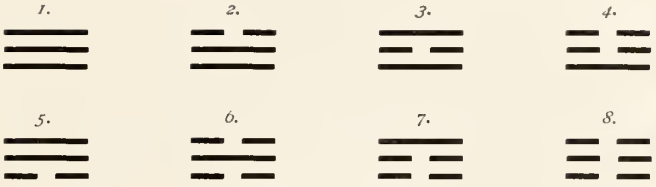
Fuh Hi's philosophy is stated as follows: "The Illimitable produced the Great Extreme; the Great Extreme produced the Two Principles; the Two Principles produced the Four Figures," and from the Four Figures were developed what the Chinese call the Eight Diagrams of Fuh Hi, in 3322 B. C., according to the chronology of Doctor Legge, the best-known English sinologue.

The Two Principles, which the Chinese say were produced by the Great Extreme, are represented thus:

From these Two Principles the Four Figures were produced by placing the Two Principles first over the one and then over the other, thus:



By placing each of the Four Figures under each of the Two Principles in succession, the Eight Diagrams were formed, thus:



To the ordinary person this will seem perfectly meaningless, or more, arrant nonsense. To the Chinaman it has great significance. To us the Two Principles, Four Figures, and the Eight Diagrams are more likely to appear to be an ingenious combination or arrangement of the letters L and M of the Morse telegraphic code, had that been known to Fuh Hi.

Triskelion Carved in Ash-Wood, from Scotland, showing resemblance to Tah Gook.

In formulating a statement regarding this remarkable philosophy, Mr. Holt quotes from Choo Foo Tsz — a noted interpreter of, and commentator upon, the Confucian classics in the twelfth century A. D. — as follows:

"The Great Extreme is merely the immaterial principle; it is found in the male and female principles in Nature, in the five elements, and in all things. From the time the Great Extreme came into operation, all things were produced by transformation. The Great Extreme has neither residence, form, nor place which you can assign to it. If you speak of it before its development, then, previous to that emanation it was perfect stillness. *Motion* and *rest*, with the male and female principles of Nature (Force and Matter), are only the descent and embodiment of this principle. It is the immaterial principle of the two Powers, the four Forms, and the eight Changes of Nature. We can not say that it does not exist, and yet no form of corporeity can be ascribed to it. It produced one male and one female principle of Nature, which are called the Dual Powers."

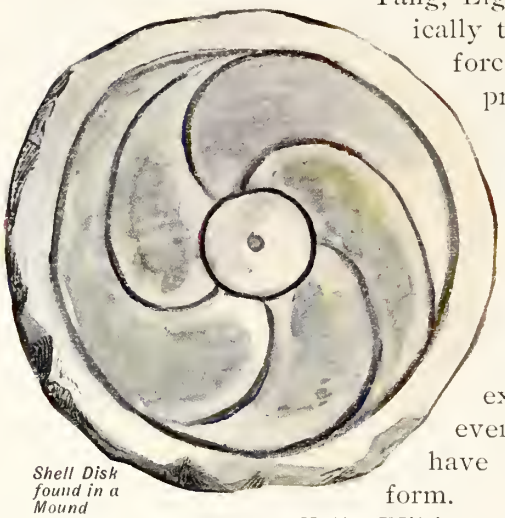
It would appear that the two central and peculiar figures of the trade-mark were meant by Chow Lien Ki as substitutes for, or a more graphic representation of, the Two Principles themselves. I have seen no clear statement on this point, but infer that his inventive mind saw a more forceful way of picturing the ideas to be represented by them than the bare lines themselves did.

Adaptation of the Tah Gook found in Anam.

These Two Principles in Chow's figure — the white and black or red and black commas or tadpoles, as you wish, of the trade-mark — are known as the YANG and YIN, and in the original they have a small black eye in the white or red, and a white eye in the black portion. These eyes are intended to show, according to Rev. Doctor

Du Bose, that there is a male germ in the female and a female germ in the male principle.

Although the Two Principles, or the Dual Powers as they are also called, are now almost universally understood in China in a phallic or sexual sense, Doctor Martin insists that the primitive meanings were: Yang, Light, and Yin, Darkness, and that philosophically they stood for certain positive and negative forces. As, however, they stand for the creative principle in every sense of the word, the phallic signification attached to them would seem to be a corollary of the meanings *light* and *darkness*.



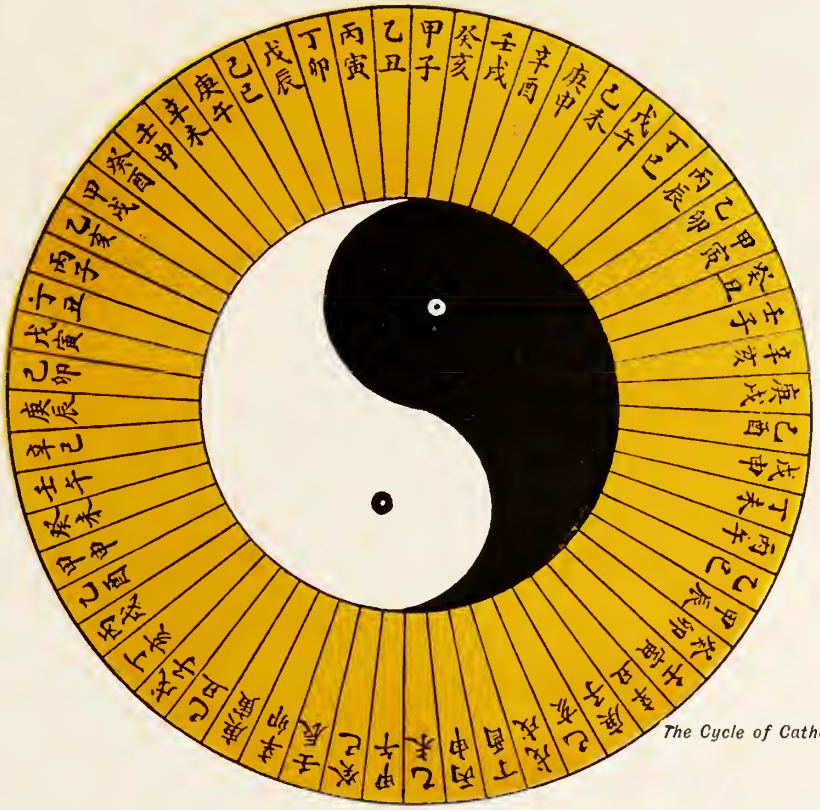
Shell Disk found in a Mound of the Mound Builders in Tennessee, resembling Tah Gook.

In stating that the Yang and Yin stand for light and darkness and the sexual or creative idea, practically about all that there is to say as to the original notion and its pictorial expression has been said. The expansion or elaboration of the idea, however, is quite another matter, and the changes have been rung upon it in every conceivable form.

Dr. S. Wells Williams, Professor of the Chinese Language and Literature at Yale College, in remarking upon Chu Hi's (not Fuh Hi) philosophical notions, well says, regarding the universal application of the Dual Powers, or Yang and Yin: "His system of materialism * * * allows scope for the vagaries of every individual who thinks he understands and can apply it to explain whatever phenomena come in his way. Heat and cold, light and darkness, fire and water, mind and matter, every agent, power, and substance known or supposed, are regarded as endued with these principles, which thus form a simple solution for every question. The infinite changes in the universe, the multiform actions and reactions in Nature, and all the varied consequences seen and unseen are alike easily explained by this form of cause and effect, this ingenious theory of evolution."

This expresses it in a nutshell. It were easy to quote page after page of varied renderings of the idea to fit pretty nearly everything under the sun. A few of these are here reproduced. Those who are given to such speculations will read them with interest; others, while looking upon them as vagaries and curiosities, will see how pervasive among the Chinese are the ideas symbolized by this peculiar trade-mark.

Prehistoric American Indian Emblem, showing resemblance to Chinese Monad.



The Cycle of Cathay.

The Chinese cycle consists of sixty years, each with a separate name. Their names are here ranged in the outer circle, and read from the top towards the left hand. The present year (1896) is the thirty-second of the seventy-sixth cycle from the beginning of the cyclic era. The figures in the inner space are the dual forces, Yin and Yang, symbolized by darkness and light, which form the starting point of Chinese philosophy.

To quote again from Doctor Williams: "Heaven was formless, an utter chaos; the whole mass was nothing but confusion. Order was first produced in the pure ether, and out of it the universe came forth; the universe produced air, and air the milky way.

"When the pure male principle Yang had been diluted, it formed the heavens; the heavy and thick parts coagulated, and formed the earth. The refined particles united very soon, but the union of the thick and heavy went on slowly; therefore the heavens came into existence first, and the earth afterward. From the subtle essence of heaven and earth, the dual principles Yin and Yang were formed; from their joint operation came the four seasons, and these putting forth their energies gave birth to all the products of the earth. The warm effluence of the Yang being condensed, produced fire; and the finest parts of fire formed the sun. The cold exhalations of the Yin being likewise condensed, produced water; and the finest parts of the watery substance formed the moon."

NOTE.—The above illustration and explanation are taken from "The Chinese," by Rev. Dr. W. A. P Martin.

NORTHERN PACIFIC

YELLOWSTONE PARK LINE

Trade-mark of the Northern Pacific Railway.

General Ticket Offices :
(1) at Portland.
(2) at Tacoma.
(3) at Spokane.
(4) at Seattle.

General Ticket Offices :
(5) at Duluth.
(6) at Minneapolis.
(7) at Chicago.
(8) at Indianapolis.
(9) at Philadelphia.

1

2

3

4

5

6

7

8

9

NORTHERN PACIFIC YELLOWSTONE PARK LINE

TICKET OFFICES

SHOWING TRADE-MARK

NORTHERN PACIFIC YELLOWSTONE PARK LINE

It is not difficult to detect, in the foregoing, a striking similarity to the "nebular hypothesis" of the present-day astronomy. A glance at a statement of this theory will disclose the resemblance at once.

Sir John F. Davis, in his "History of China," quotes from the commentator Choo Foo Tsz, already mentioned, as follows:

"'The celestial principle was male, the terrestrial female; all animate and inanimate nature may be distinguished into masculine and feminine. Even vegetable productions are male and female, as, for instance, there is female hemp, and male and female bamboo. Nothing exists independent of the Yin and Yang.' Although the Chinese do not characterize the sexes of plants, and arrange them systematically as we do after Linnæus, they use the above phraseology in regard to them; nor do they confine it to the vegetable and animal creation only, but extend the same to every part of Nature. Numbers themselves have their genders. A unit and every odd number are male; two and every even number, female.

"The above might, with no great impropriety, be styled 'a sexual system of the universe.' They maintain that when from the union of the Yang and Yin all existences, both animate and inanimate, had been produced, the sexual principle was conveyed to, and became inherent in, all of them. Thus heaven, the sun, day, etc., are considered of the male gender; earth, the moon, night, etc., of the female gender. This notion pervades every department of knowledge in China. It exists in their theories of anatomy and medicine, and is constantly referred to on every subject."

Doctor Martin says (p. 126, "The Chinese"): "*Woo Kieh* produced *Tai Kieh*, *Tai Kieh* produced *Yin* and *Yang*, and these dual principles generated all things. This is the lucid cosmogony of the Chinese, and it adds little to its clearness to render the above terms, as they are usually translated, by the 'great extreme,' the 'male and female powers,' etc." Again, he says (pp. 162–3): "The common statement given in Chinese histories may be freely rendered in the following form: 'The indefinite (1—Woo Kieh) produced the finite or definite (2—Tai Kieh), the elements of Nature as yet in a chaotic state. This chaos evolved the principle of *Yang*, or light. The *Yang* produced *Yin*, i. e.,

darkness followed in the way of alternation ; and the *Yin* and *Yang* (3) together produced all things from the alternations of day and night, and the succession of the seasons.'"

Commenting on this, he says: "Commencing with this simple idea, the *Yin* and *Yang* have been gradually metamorphosed into mysterious entities, the foundation of a universal sexual system, and incessantly active in every department of Nature—at once the fountain of the deepest philosophy and the aliment of the grossest superstition."

Without dipping deeper into this recondite discussion, an idea has been given, I hope, of the significance of the Great Monad, or the Trade-mark, to the 400,000,000 of Chinese.

Metaphysicians have noted a parallelism between the Yang and Yin and the mundane egg of the Egyptians ; have seen coincidences between it and its philosophical elaboration and the philosophies of still other nations, Persia, India, etc., and even between it and the Christian Scriptures.

The symbol is very generally used by the Chinese in the ordinary affairs of life. It is suspended over the doors of residences as a charm; it is used to ward off evil influences ; it is much used by fortune-tellers and necromancers. The Japanese form of the Monad is also used as a symbol of good luck.

A common form in which it is found is shown in the illustration on the following page, where will be seen the *Tai Kich*, or Yang and Yin, with the eyes surrounded by the Eight Diagrams.

The symbol was obtained from a Chinese store in Portland, is circular, and measures five and one-eighth inches in diameter, the Yin and Yang in the center measuring two and one-eighth inches across. The design is most commonly seen, though, on a board six to eighteen or twenty inches square, or one foot wide by two feet long, having the Eight Diagrams painted around it, as in the illustration of the circular Monad, so as to leave the Great Extreme in the center, which is used as a charm to ward off evil spirits. In this country these charms can be found in great numbers in some of the mercantile houses on Second Street, in Portland, and in similar establishments in San Francisco. The small ones can be carried around, while the larger ones are placed over doors and at other conspicuous places as a guard against evil spirits.

The Yin and Yang in the figure here shown are black and red ; the field surrounding them is green, and the Eight Diagrams are raised characters gilded.

As the Chinese use the figure, the colors of Yang and Yin are not important. While red and black are common, so also are white and black — used also by the Northern Pacific in one-color work — and red and green.

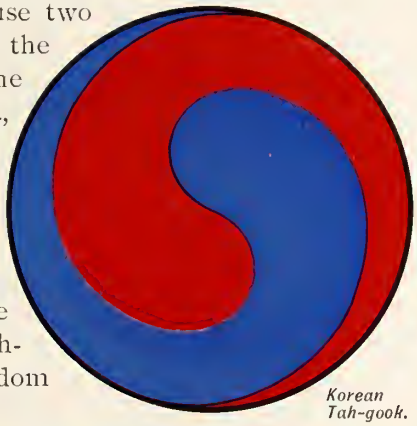
The Great Chinese Monad. Used as a Charm by the Chinese.

THE KOREAN TAH-GOOK.

Although the trade-mark is of Chinese origin, it was, as stated, first seen by a Northern Pacific official on the Korean flag. There seems to have been perfect free trade between the Orientalists, at least so far as philosophic ideas and symbols go. The emblem is found not only among the Koreans, but also in Japan. In Korea it is known as the Tah-gook — the Korean pronunciation of Tai Kieh — and its meaning

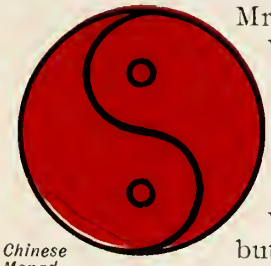
is practically identical with that in China. It is the national emblem of Korea.

The word Korea, Mr. Holt says, is derived from Kao, the first king, "Kaoli" being the form in which it appears among the Koreans. The Koreans, in speaking of their country, also use two Chinese words, "Chao Sien," pronounced by the Koreans, "Chosen," and meaning "before the dawn," or "morning calm." The name Korea, rather freely translated, means, therefore, "the land of the morning calm," from all of which is evolved our word Korea. The two principles of Nature—the Yang and Yin of the Chinese—are represented by red and blue in the Tah-gook. Red is the royal color; blue is the color of the east, the morning. The Tah-gook, therefore, to Koreans, means "The Kingdom of the Morning."



Korean Tah-gook.

The Koreans arrange the Yang and Yin horizontally or angularly instead of vertically. The Japanese use three heads instead of two, and the colors are red, blue, and green. The Japanese, the common people at least, regard the symbol with superstitious awe, and it is made in silver discs the size of a half-dollar and carried in the sleeve of the "kimono" as a charm.

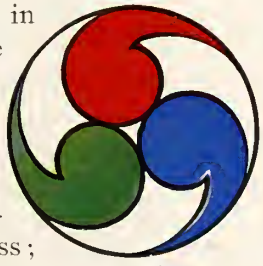


Chinese Monad.

Mr. Forster H. Jenings, late of the Korean legation at Washington, says of the Tah-gook, after a careful investigation of Korean classical works: "It is found on graves dating back thousands of years B. C., and in every kind of climate, from the rattan groves of Anam to the icy shores of Yezo in the north of Japan. In the various countries the shape of the symbol has undergone but little change." Mr. Holt mentions having seen the Eight Diagrams that usually accompany the Chinese emblem engraved on eight large and very ancient stones within the city limits of Hang Chow, China.

The eyes of the Yang and Yin in the Chinese Monad are wanting in the symbols as used by other nations.

In Korea the use and meanings of the Tah-gook seem nearly or quite as diffused and various as those of the Tai Kieh in China. On the Korean national flag the red and blue (Yang and Yin) are found upon a white field.



Modification of Chinese Monad, as used in Japan.

Accompanying this paper are certain illustrations drawn in colors, and kindly furnished by Mr. Jenings. Some of these are of the Monad and Tah-gook and its modifications in the east; others are of ancient drawings of other countries resembling them, more or less;

while still others show a similarity in design to the eastern figures, in the work of our own American Indians.

This is not the place for discussing these drawings, and the question as to whether the recurrence of the scroll or spiral is anything more than a very natural and varied use of a simple, easy, and ornamental geometrie element is one for ethnologists and archæologists. As used here the designs afford a curious and interesting comparison for the general reader. In the reports of the United States Bureau of Ethnology many instances can be found of the use of the spiral in ornamentation by the Pueblo Indians of the Southwest, and shell ornaments covered with them have been taken from mounds made by the Mound builders, as shown in one of the illustrations.

Enough has been written to show the wide influence exercised among Oriental peoples by the Monad, Tai Kieh, Tah-gook, or Trademark, however one wishes to speak of it; how it permeates all life, actually and practically; how beautifully it lends itself to the mysteries of eastern philosophical speculation.

But note how appropriately it takes its place as the symbol or trade-mark of a great transportation company. Light and darkness, force and matter, motion and rest, fire and water, all are contained within this mysterious figure — and all are so closely related in the calling for which the emblem stands. Day and night the great freight and palatial passenger trains of the Northern Pacific Railway, through the agency of fire and water, are now in rapid motion and again at rest throughout the mid-continent region of the great republic of the Occident.

Where could a more appropriate emblem for a great transportation company be found than in this design? "Motion and rest," "force and matter," of which the figure conceives, are most effectively exemplified and manifested in the pursuit which it symbolizes. It would almost seem that Chow Lien Ki, with the far-seeing vision of the Yang and Yin, looked forward to that time in the nineteenth century when the Northern Pacific Railway, in need of a device emblematic of its calling, would be drawn to "The Diagram of the Great Extreme" formulated by himself and which had been awaiting its coming for five thousand years.

It would thus appear that one of the great transcontinental railway companies of the United States has, by the adoption of its unique trade-mark, linked closer together the old Chinese and Korean civilizations with the newer one of America; that the steel rails of the Northern Pacific, in connection with the steamships of its copartner in commerce, the Northern Pacific Steamship Company, have established a new bond between the young republic and the old empire, the Occident and the Orient.

There is still another and an interesting phase of the subject.

Mr. Sam Loyd, the puzzle genius of New York City, in a letter to Mr. McHenry, calls attention to the facility with which this emblem lends itself to the working out of geometric problems and puzzles. I call attention to one only, but that is peculiarly significant, considering the use made of the Monad by both the Chinese and Japanese.

It will be recalled that they use the symbol to ward off evil, etc., or in other words to bring them good luck.

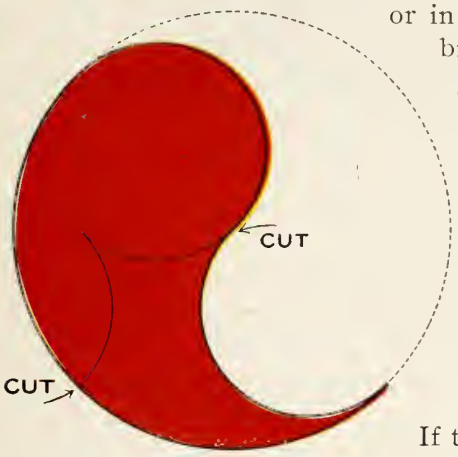


Fig. 1.

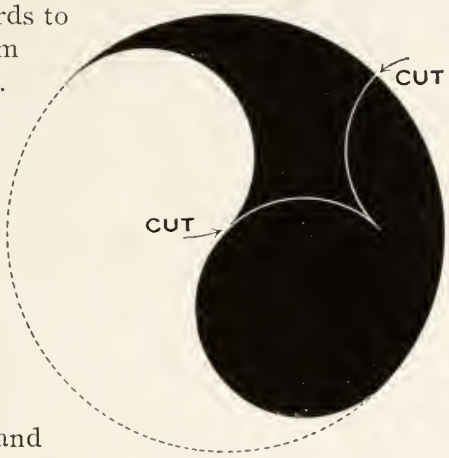


Fig. 2.

If the Yang and Yin are cut — in two strokes each — as shown in figures 1 and 2, and the pieces rearranged or refitted, as shown in figures 3 and 4, it will be seen that the Chinese emblem of good luck becomes, at once, the Yankee symbol of good luck, the *horseshoe*, of which there are, of course, two in each Northern Pacific trade-mark.

Fig. 3.

Fig. 4.

Mr. Loyd states also, that he knows that the method in vogue of covering *base-balls*, the peculiarity of which has doubtless attracted universal attention, was suggested to the patentee by the Yang and Yin of the Monad or trade-mark.

The "North Coast Limited"

IT is amazing, when one stops to consider, the progress that has been made in passenger railway travel within the last quarter of a century. Nor has this progress been confined to any one thing. Rails, roadway, engineering, motive power, rolling stock, stations, mails, eating, sleeping, methods of handling tickets and baggage, deportment of employes; in fact, everything connected with train operation and equipment has been pretty nearly revolutionized within that time.

While Pullman sleeping cars were then in quite common use, and drawing room and dining cars were by no means unknown, still, they were not the every-day part of train equipment that they now are, nor were they so well designed for the accommodation and comfort of passengers. The day of car libraries, bath rooms, buffets, compartments, vestibules, steam heat, Pintsch gas, electric lights, observation platforms, and many lesser but important improvements, was a long way in the future. The so-called "limited" trains were yet to come.

Strange as it may seem, the West was, perhaps, the leader in car and train improvement, and this position *it practically retains to-day.* The writer well remembers his surprise, when, in 1874, having changed at Chicago from a well-known New York-Chicago line to a Chicago-Omaha road, he found the Pullman cars and employes of the latter road immeasurably superior to those of the former in comfort and courtesy.

Different kinds of trains are demanded in different parts of the country. The exigencies of traffic on different railways and in particular localities determine this. For example, the daylight run between New York and Buffalo obviates the necessity on such trains for any sleeping cars; with the fine trains on the night run between Chicago and St. Paul and Minneapolis the sleeping car, both standard and compartment, is the "paramount issue." On a transcontinental journey a still different train, in many respects, is demanded.

In the spring of 1900 the conditions of traffic on the Northern Pacific seemed to necessitate a new, thoroughly up-to-date train. Between May 1st and November 1st what was known as the "North Coast Limited" train was run *daily* between St. Paul, Minneapolis, and Duluth, and Seattle, Tacoma, and Portland, and the train — even better than in 1900 — will again be put into commission on May 5, 1901.

This train was the surprise of easterners, the pride of the Northern Pacific, and the talk of the West. It required *ten distinct trains* of eight cars each — eighty cars in all — to provide the necessary equipment, and nine of these trains were in synchronous operation a part of each day. The aggregate cost of these trains, each train being composed of new cars, was about $800,000, and each train weighed about 500 tons. The train is equipped with broad vestibules, Westinghouse air brakes and air train signals, steel platforms, M. C. B. couplers, Gold system of steam heat, electric lights, and steel-tired paper wheels. The train covers the distance between St. Paul and Portland — 2,056 miles — without the change of a car.

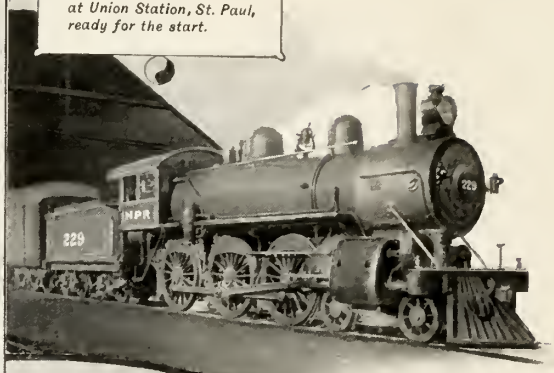
The locomotives which haul these trains are the best product of the Schenectady Locomotive Works. They are of the ten-wheeled type, having six driving wheels, each of seventy-three inches diameter, which carries them nearly twenty feet at each revolution. The engines — perfect monsters — supply the steam for the dynamo and for heating the train.

The first car is a mail car; the second, a seventy-feet-long combined baggage and express car. Here also is the large dynamo that supplies the 300 — nearly — electric lights found on the train. Storage batteries keep the lights burning during all changes of engines, and each train necessarily carries an electrician. A combination second-class coach and smoking car is followed by a first-class coach finished in mahogany, with usual modern toilet rooms, high and comfortable reversible seats, ice-water tank, etc.

We now come to one of the features of the train — the large sixteen-section Tourist Sleeping Car. This car is not common to eastern roads.

On a long across-continent journey many persons feel that they can not afford the expense of a berth in the first-class Pullman. The Tourist Sleeping Car is intended for just such. At less than one-half the cost of a regular Pullman berth, one is about as comfortably cared for, considering essentials only, in this car. The beds and bedding are good and clean — regular Pullman bedding — and the car is in charge of a Pullman porter. The seats are upholstered in olive-green leather and the woodwork of the car is finished in mahogany. There are separate toilet rooms for men and women, and the latter will be glad to know that the lavatory arrangements for them are roomy and complete. At one end of the car is a cooking range, with fire, for use

"North Coast Limited" passing through yards at St. Paul, beginning its transcontinental journey.



"North Coast Limited" at Union Station, St. Paul, ready for the start.

Rear of Observation Car of "North Coast Limited."

"North Coast Limited" under full headway, sixty miles an hour, on Yellowstone Division, Montana.

"North Coast Limited" on an up grade between Minneapolis and St. Paul.

The "North Coast Limited."

of the occupants of the car who prefer to prepare their own meals. This car has been a most popular one on the "North Coast Limited," and its praises have been sounded far and wide.

How many among those who may read this, remember when, on a long journey, a slight delay in reaching an eating station was productive of a hard headache, or an attack of indigestion later on? Such a thing can not happen on a Northern Pacific transcontinental train. A standard Northern Pacific Dining Car is an integral part of the "North Coast Limited"—also of regular transcontinental trains No. 3 and No. 4—between St. Paul and Portland. It is an unwritten law that this train must not be behind time, but as delays will sometimes happen, even in *all* well-regulated railway families, the presence of the dining car is a guaranty of regular meals. This car accommodates thirty-six persons at a time; is supplied with electric fans for cooling the air, and the menus are full and varied. Breakfast and luncheon are served on the *à la carte* plan; dinner, *table d'hôte*, $1.

The Pullman Standard Sleeping Cars on this train are models of their kind. Compartment cars are out of place on a trip across continent. The occupants of each car are companionable on such a journey, for the time being members of a common family, and are usually not inclined to be cloistered in small rooms where they can look out upon but one part of the landscape. For those who prefer, however, to be thus immured and segregated, each car has a stateroom or drawing room. The usual first-class Pullman furnishings and equipment are found in these cars and each section is provided with *two* electric berth lights which can be turned on or off at will.

The crowning feature of this train is the Observation Car. By common consent it outranks anything of the sort found in the entire country. It is the notable car of a notable train.

The first forty feet of the car contain a gentlemen's toilet room, two smoking and card rooms each containing six wicker chairs, a buffet, barber shop, bath room, and a ladies' toilet room, all opening on a side corridor. Then follows a space containing a library of 140 volumes and the current magazines, a writing desk and "North Coast Limited" stationery free; two open-seated sections; and, lastly, the ladies' parlor and observation room. An appreciative newspaper man thus describes the parlor and car:

"It is 9 by 22 feet and is luxuriously appointed, including, *inter alia*, fourteen handsome portable wicker chairs. They are exquisitely upholstered in plush, with colors in eye-soothing harmony with the dark-green Wilton carpets. Contrary to custom, no smoking offends the ladies. This is forbidden in their department. In ordinary observation cars, ladies are practically ostracized by the thoughtless cigar-users. Owing to the 'North Coast Limited' arrangements, fair travelers are spared this unpleasantness, happily.

"The decorations of the mahogany-finished interior car are sumptuously rich, but at no point do they overstep the bounds of good taste, and no traveler, accustomed to dainty freseoing and other varied types of home adornment, fails to express admiration at the success attending the company's efforts to duplicate the atmosphere of domesticity.

Interior of Tourist Sleeping Car "North Coast Limited."

"The exterior of this car is of the standard Pullman color, as is the entire train, as familiar as the gleam of copper and gold to the Northwestern eye. The structure is begemmed with large plate windows, through which, as we have intimated, a perfect view of the country through which the train is speeding may be obtained without a particle of exertion. To the more ambitious sight-seer, who would fain commune face to face with nature in her various moods, the rear platform affords abundant opportunities for such pioneer spirits. It is 6½ by 9 feet in dimensions, and is surrounded by an ornamental brass railing, and is partially enclosed by the extended sides of the car, while a pretty dome entirely covers it."

At the rear end of this car is attached a large trade-mark of the road, which is electrically illuminated at night.

To those having paid for accommodations in the Standard Pullman Sleeping Car, this car is free; other first-class passengers are privileged to use it upon payment of a reasonable charge, graduated according to distance traveled. The charges for bath, buffet, and barber shop—free of course to none—are reasonable.

During the Yellowstone Park season, June 15th to September 15th, park tourists, eastbound, use the "North Coast Limited." The only change of cars in this train, either eastbound or westbound, is made at Livingston (junction with Yellowstone Park branch), where the eastbound train drops one sleeping car and picks up another—one bound to, the other coming from, the park—the number of cars in train remaining the same.

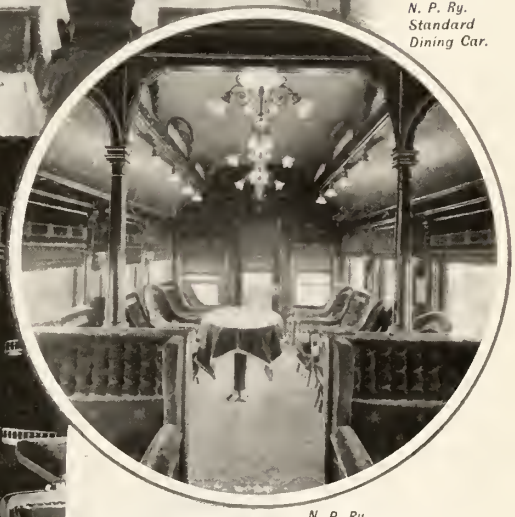
It must be remembered that the "North Coast Limited" runs through the garden and beauty spots of the Northwest.

The Lake Park Country of Minnesota; Red and James River valleys; Pyramid Park—Bad Lands—of North Dakota, a unique, wonderfully colored, spectacular region; Yellowstone Valley, 341 miles long, with the Yellowstone River in sight all the way; Gallatin

Valley, hemmed in by the Rockies; Hell Gate Cañon and river; the Jocko and Clark Fork rivers; Lake Pend d' Oreille, jeweled among the mountains; Yakima Valley, being transformed from a desert to a garden by irrigation; the Puget Sound Region; Columbia River and Willamette River valleys, all come and go panoramically. Those using this train in both directions are enabled to see almost every foot of this country.

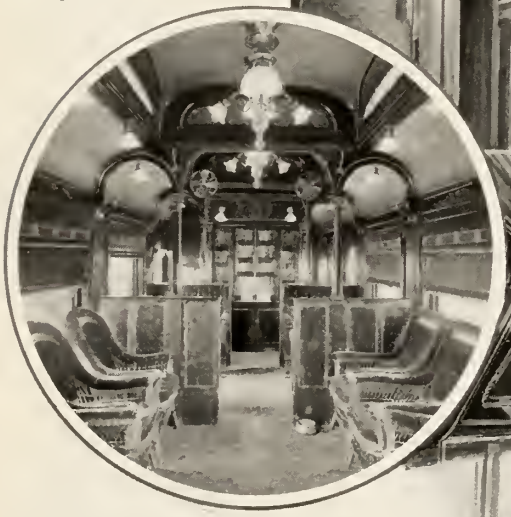
The "North Coast Limited" passes through nearly all the important cities of the Northwest, too, between St. Paul and Portland, including Minneapolis, St. Cloud, Little Falls, Fargo, Jamestown, Bismarck, Mandan, Miles City, Billings, Livingston, Bozeman, Butte (connection at Logan to

N. P. Ry. Standard Dining Car.



N. P. Ry. Observation Car facing Observation Platform.

Bathroom and Corridor, N. P. Ry. Observation Car.



N. P. Ry Observation Car facing Library.

Pullman First-class Sleeping Car.

"North Coast Limited" Interiors.

and from Helena, and at Butte or Stuart for Anaconda), Deer Lodge, Missoula, Spokane, North Yakima, Seattle, and Tacoma.

Those returning east from a winter's sojourn in California will find that this train, in connection with Shasta Route trains, furnishes the greatest ride for the money, to be found.

Besides the "North Coast Limited," during the summer season the Northern Pacific runs the "Copper City Limited" between Butte and Hamilton, Mont. This train passes through the smelting city of Anaconda, and Deer Lodge and Missoula, and up the noted Bitter Root Valley. At Hamilton, the Hotel Ravalli is one of the most restful and finely appointed hotels in the West, and in the heart of a fine hunting and fishing country.

The "Lake Superior Limited" makes its flight every day in the year between St. Paul and Minneapolis at one end of the line, and Duluth and Superior on Lake Superior. This is the popular train between these cities, and runs over the "Duluth Short Line," the old St. Paul and Duluth Railroad, now a part of the Northern Pacific System.

This train covers the distance between the Head of the Lakes — Duluth and the Superiors — and the Twin Cities, in each direction, *in daytime*. Its equipment is entirely new and consists of modern coaches, elegant parlor cars, and observation cars in no respect inferior to those found on the "North Coast Limited." Indeed, it may be said to be a "North Coast Limited" on a slightly reduced scale.

Rocky Canon, near Bozeman, Mont.

Along the Clark Fork, Mont.

Entrance to Rocky Canon, nine miles east of Bozeman, Mont.

As seen from the Observation Platform of the "North Coast Limited."

THE CUSTER BATTLEFIELD

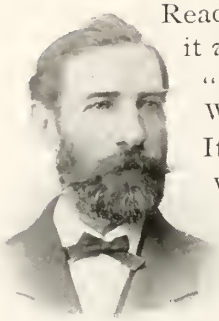
I AM afraid that the impression exists, particularly among eastern people, that the spot where Custer and so many of his men laid down their lives is far remote from transportation lines, and difficult of access.

This was certainly true on that fated 25th of June, 1876, when disaster overtook the Seventh United States Cavalry.

But now! 'tis a quarter of a century since that event. The land has been fairly transformed at many places. Hundreds of thousands of dollars have been expended by Crow Indians alone, in the construction of irrigation canals under the very shadow of the Custer battle monument. The Custer battlefield is only about the same distance—forty miles—from Custer Station, on the Northern Pacific Railway, that Washington City is from Baltimore.

Custer Station is near the mouth of the Big Horn River, and the ride, by private conveyance, up the valleys of the Big Horn and Little Big Horn rivers to the battlefield, is one of exceeding interest and, at places, of beauty. It prepares one to view the scene of such direful consequences with feelings suitable to the spot and what it suggests.

From Billings it is but a seventy-mile stretch via the Burlington Route, which there connects with the Northern Pacific, to the same spot, if one chooses to go entirely by railway.



Frederick F. Gerard
Custer's interpreter during the campaign of 1876.
Mr. Gerard, when Custer divided his command into detachments just before the fight, was ordered to report to Major Reno, together with the Indian scouts, and his life was thus, luckily for him, preserved.
Gerard was one of those left in the river bottom, escaping after nightfall.

Read the story of Terry's mareh and one will indeed think that it *was* a long distanee from habited regions to

"That desolate land and lone,
Where the Big Horn and Yellowstone roar down their mountain path."

It was in the Centennial year; the attention of the nation was eentered on that splendid exhibition at Philadelphia emblematie of our progress through a hundred years. Like a thunder-elap out of a elear sky eame the tidings of an awful disaster in the far Northwest, to a man and regiment thought to be impregnable. The eountry was stunned, and from thousands of hearts and hearthstones there went up a silent requiem for those who slept the sleep that knows no waking, on the bluffs of the Little Big Horn, in far-away Montana.

And yet, was this surprise justified? For two or three years events had been so adjusting themselves as to bring about what actually oeeurred, and we were principally to blame for it ourselves, and should have easily foreseen what eame to pass.

In May, 1876, a triangular eampaign was inaugurated against the Sioux and allied tribes. From Fort Fetterman, Wyo., General Crook, the greatest Indian fighter of his day, marched north with 1,000 men; from Fort Abraham Lineoln, Dak., now North Dakota, went General Terry westward with another thousand; from Fort Ellis, near Bozeman, Mont., General Gibbon marehed eastward with about 450 men.

On June 17th Crook had a tussle with the Indians on the headwaters of the Rosebud River, whieh was in reality a defeat for him, and he withdrew southward to Goose Creek, across the Wyoming line, to await reinforcements. The Indians opposed to him numbered at least 700, and, possibly, two or three times that number.

Group of Officers and Ladies of 7th U. S. Cavalry, taken at Fort Abraham Lincoln

On the day that Crook was fighting, Major Reno with a portion of the Seventh Cavalry was seouting the country between the Powder and Tongue rivers, somewhat northeast from Crook's battle ground, while Terry, with the

1. General Custer.
2. *Captain Keogh.
3. *Captain Yates.
4. *Doctor Lord, Chief Surgeon.
5. *Lieutenant Calhoun.
6. *Lieutenant Smith.
7. **Lieutenant Hodgson.
8. †Doctor Porter.
9. Scout Charlie Reynolds, killed in Reno's fight in river bottom.

*Killed with Custer.
**Killed during Reno's retreat.
†Only one of three surgeons who survived the battle of Little Big Horn. Resident of Bismarck, N. D.

remainder of his command, had just made camp on the Tongue River about where Miles City now is. Efforts were made to get couriers through from Crook to Terry, but without success, although Reno's scouting party and Crook were within forty or fifty miles of each other at one time. Terry, Custer, and Gibbon knew nothing, therefore, about Crook's fight, and Custer never knew of it. After the battle with Crook, the Indians withdrew northward to the valley of the Little Big Horn.

Knowing of the indecisive results of Crook's operations, the

authorities and the country as a whole should not have been unprepared to hear of another possible disaster.

On June 21st Terry's and Gibbon's commands formed junction near the mouth of the Rosebud River, Terry in supreme command.

At this point a plan of campaign was adopted, and in pursuance thereof Custer and the Seventh Cavalry started, at noon of June 22d, up the Rosebud River to strike a broad Indian trail that Reno had found during his previous scout.

On the 23d and 24th this Indian road was followed westward toward the Little Big Horn, and early on the 25th the column was drawing near the Valley of the Greasy Grass, as the Indians called the Little Horn Valley.

Custer was in command of his regiment on this march, and there were twelve troops or companies, and the number of men aggregated about 550 or 600.

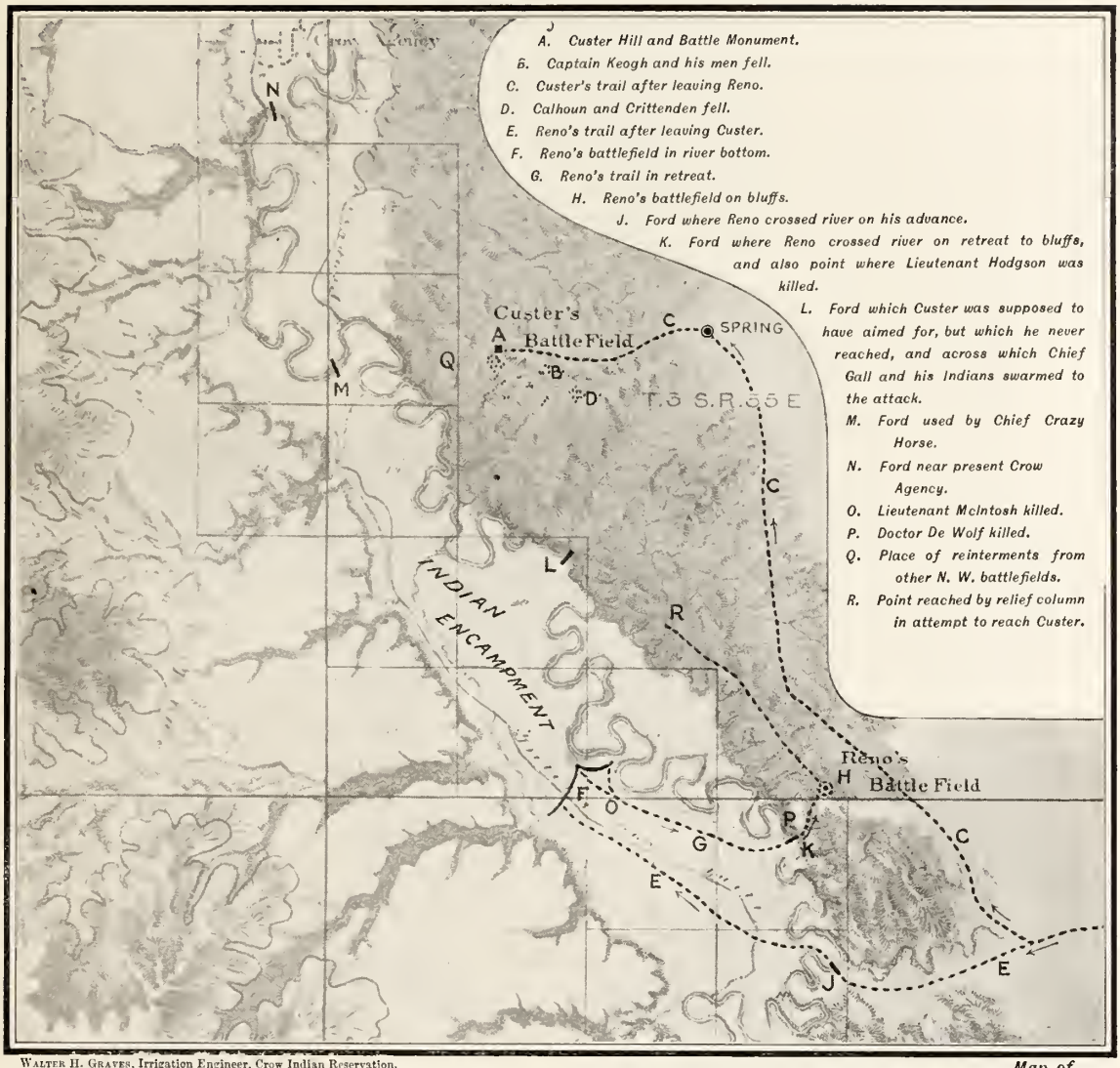
At the divide between the Rosebud and Little Horn rivers it was definitely ascertained that the trail led to the valley of the latter stream, and that the Indians were encamped there. It was also supposed by Custer and his men that their own presence was then known to the Indians, but there is some doubt as to this being a fact.

Here, about twelve or fourteen miles from the Little Horn, the command was divided into four detachments.

One battalion, under Captain Benteen, consisted of three troops, 135 to 150 men, and was sent away scouting, southwestward; a second battalion of the same size, under Major Reno, proceeded westward and, under orders, attacked the upper end of the Indian village across the river; one troop, under Captain McDougall, was detailed as escort to the pack train which carried the reserve ammunition; the remaining battalion of five troops, numbering about 225 men, Custer himself led, and after marching for some miles parallel to and near Reno's forces, he turned from the latter toward the north, expecting to find a ford somewhere, and to attack the village from another quarter, and in so doing support Reno's attack.

This division of forces, although not an unusual one under such circumstances, *was* an ill-conceived move and the results disastrous. Every man, barring possibly a few of the scouts, was an utter stranger in a strange land; Custer expected to meet from 1,000 to 1,500 Indians, and against that number his combined force, scouts, Indians, and enlisted men, did not exceed 600; this disposition of his command both lessened his striking power and rendered mutual support impossible, and as the sequel soon showed, this support was badly needed.

It must be borne in mind that the phrase "Custer Battlefield" includes three distinct fields of battle: Reno's point of attack in the valley proper, the bluffs across the river to which he retreated and



WALTER H. GRAVES, Irrigation Engineer, Crow Indian Reservation.

Map of Custer Battlefield.

where the Indians attacked *him*, and Custer's own battlefield some miles down the river from the scene of Reno's engagements.

Reno's attack upon the Indians was at a bend of the river on the west bank, about two miles from where he forded the stream. The point on the bluffs where he was besieged was from a mile to a mile and a half to the east of the scene of his first fight, and on the *east* side of the river. Custer's field of carnage was more than four miles down the stream from Reno's Bluffs, on the high ground which was a continuation of the line of hills where the Indians penned in Reno.

The river bottom at this point is generally flat, quite heavily timbered along the river, and is about two miles wide in its widest parts. The river itself, while hugging for the most part the eastern

Where Lieutenant Crittenden Fell, Showing first marker erected.

bluffs, winds in great coils in all directions and at two or three points stretches across the valley nearly or quite to the western hills. For the distance of four or five miles along the banks of the stream, and largely hidden from view by the timber, the great Indian city extended. The principal bands encamped here were the Hunkpapas, Brulés, Ogallalas, Cheyennes, Minneconjous (or Minneconwojus), and Sans Arcs, with a few scattering tepees from other bands or tribes. The number of Indians at that time camped in the valley has been a fruitful theme for disputation, as indeed has nearly everything that occurred in connection with this series of battles. There were certainly 1,500

Where Custer Fell. (Soon after battle.) The bones are those of horses.

Grave of Captain Keogh, Showing first marker erected.

Lieutenant Sturgis' Grave as first marked.

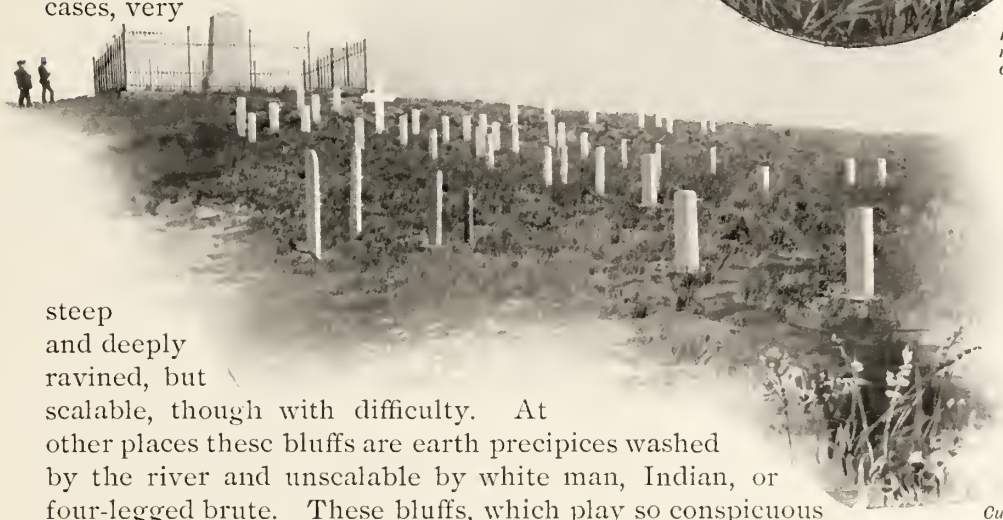
It is now accepted as a fact that Lieutenant Sturgis' body was not certainly found, and the identification indicated in the illustration was undoubtedly a mistake.

Graves of Unknown on Custer Hill. Just after battle.

warriors, and there may have been twice that number, or even more. They were well armed with the most improved American rifles, bows and arrows, and their usual stone implements of war.

The western side of the valley above the bottom land is an easy rising slope to a gullied plateau some distance back. The bluffs on the eastern side and across the river are, in some cases, very steep and deeply ravined, but scalable, though with difficulty. At other places these bluffs are earth precipices washed by the river and unscalable by white man, Indian, or four-legged brute. These bluffs, which play so conspicuous a part in these battles, are from 100 to 200 feet high for the most part, with knolls reaching 100 feet or, perhaps in some cases, 200 feet higher. They are of clay, ash gray in color, with more or less wild grass on top.

First Monument erected on Custer Hill.



Custer Monument and Hill. Showing permanent monument and marble headstones. The cross marks the spot where Custer fell. About him were Yates, Tom Custer, Riley, Smith, and others.

There is no regular ford that Custer could have used between the ford used by Reno in his attack and one just south of where Custer fought his battle. The one used by Reno in retreat was an emergency ford.

After Reno, in his forward movement, reached the river, forded it and watered his horses, he advanced across the valley, and in a half-hearted way attacked the Indians. He was not well fitted to lead such an attack, and his conduct that day was more like that of one bereft of reason than of a fighting major of cavalry. Had Custer himself, with his dash and bravery, led this charge at the head of his entire regiment, forlorn as was the hope, there might have been a different story to tell.

The Indians at once saw the irresolution and inability exhibited and promptly acted upon it. They immediately assumed the offensive under chiefs Gall, Black Moon, and others, and in a very short time

Reinterments.

Looking Southwest from Custer Monument. Cross shows where Custer fell. Little Big Horn River and Valley, where Indians were encamped, shown in the distance. On edge of picture the point where reinterments from various battlefields and military posts in northwest is seen.

had scattered Reno's Indian scouts, about forty in number, completely disarranged his line, and finally forced him into the timber in a bend of the stream. This was a strong position and could have been held indefinitely, but it is a serious question whether that would have been advisable.

Discipline and organization still remained, and Reno, apparently utterly demoralized himself, at last made an effort to get away. This movement he styled a "charge." This "charge" should be studied by all students of military history, as it was probably as original, unique, and peculiar a charge as any known in military tactics. It should become immortal in our own army annals. It was led enthusiastically by Reno himself, and was directed, *not* against the *Indians*, but against the clay bluffs across the river. As the Indians, however, had him pretty nearly surrounded, there were necessarily and incidentally a few of them near his line of "charge," but the impetuosity of his flight was not checked, nor was he personally injured, although many who followed him were killed.

Other officers of the Seventh Cavalry usually have called this "charge" a retreat or rout. Few of the officers or men knew what was going on, and the result was that many were left in the timber, where they hid during the day, escaping later.

It was about 2 o'clock of the 25th when Reno reached the bluffs, and at about 2.30 P. M. Benteen came in from his scout, and at about 4 or 4.30 o'clock McDougall and the pack train arrived. From this time until evening of June 26th the Indians had this force surrounded

and under more or less constant fire, day and night. When Terry's and Gibbon's column arrived in pursuance of the prearranged plan, the Indians retreated and Reno's command was succored.

Some years since, when I rode over these battlefields, Reno's position on the bluffs was still well marked. Skulls of horses were lying about, and his lines of entrenchments were, many of them, still visible. It seemed a poor position, being dominated by higher points on nearly all sides, and these points the Indians had seized and occupied.

Why the latter did not clinch their victory over Custer by annihilating Reno's command, which they could easily have done, is one of the unsolvable mysteries.

The difficulty in reaching the top of the bluffs experienced by Reno's men in their stampede is evident at a glance, when one is standing there. The ravine up which men and horses had to scramble while Gall and his Hunkpapas were pumping cold lead into them, is one of the roughest and steepest in the vicinity, and one can readily imagine the strenuous efforts required to accomplish their purpose.

The route pursued by Custer after he left Reno has been the subject of much dispute. There seems little doubt now that he followed at first a "draw" or depression that ran behind the river bluffs. He was hidden from the Indian village and was from one-half a mile to two miles from the river. He finally came out on a higher and second line of bluffs parallel to the first or river line. He knew nothing of what was before him and we know precious little of what he did or what happened in detail, save as we get it from the Indians, and they seem to be about as diverse in depicting events as white men.

Not long after he diverged to the north he sent a courier, Theo. W. Goldin, now of Janesville, Wis., to Reno, and some

Looking toward Custer Monument from east of Custer Ridge. *The headstones seen mark the coulee and slopes where Captain Keogh and his troopers fell.*

Looking northeast from direction of Little Big Horn River. Custer Hill and Monument in background.

Two Moon, a Cheyenne Chief, in Battle of Little Big Horn.

time afterward, another, Trumpeter Martin, to Benteen with the now famous "Benteen order," so that from these men we know his trail up to the time they left him. From Captain Godfrey, then Lieutenant Godfrey, of troop "K," we know of another point on the trail on the high ground immediately back of Custer's battlefield, which Godfrey and Trumpeter Penwell visited on June 28th after the battle.

From this high point the trail turned at right angles, westward, and led to the ridge and slopes upon which the bodies of the command were found. Just south of the termination of the Custer ridge there is a wide, shallow coulee in which there is running water at some seasons of the year, supplied by a spring at its head. This coulee leads to a ford at the river, the first one down the stream below those used by Reno. The original theory, that Custer reached this ford and attempted to cross the river, has long since been disproved. It was a natural theory, but it was eventually found that the facts did not support it, and this remains true to-day, recent and more or less sensational statements to the contrary notwithstanding.

Sitting Bull, Sioux Medicine Man, at Battle of Little Big Horn.

Rain-in-the-Face, a Hunkpapa Sioux, in Battle of Little Big Horn.

Below this ford about two miles is another, which, as well as the one just noted, the Indians used in making their attack on Custer.

According to Goldin, the fight with Custer began soon after he turned westward from the high point on the back ridge.

Military men have thought that they could interpret much that occurred here from the lay of the land and the positions in which the dead troopers lay. Doubtless this is to some extent true, but from what the Indians say, and from the discrepant conclusions of officers themselves, it is open to question whether the battlefield reveals a great deal beyond the fact that the men were killed at certain points.

The Indians attacked, not from the river, but on the flanks and rear. The horses were, most of them probably, first stampeded, which insured disaster, for they carried the reserve ammunition. But few

A Band of Sioux.

Old-Time Sioux Village.

dead horses were found, the Indians capturing the most of them alive.

At a cross ridge, facing nearly east, and the so-called Custer ford coulee, the bodies of Lieutenants Calhoun and Crittenden, with those of the men of troop "L," were found; some distance back of, and between them and Custer, near the bottom of a shallow draw, Captain Keogh and the men of troop "I" lay; along the main ridge, on both sides, but mostly on the west side, the larger number of troops "C," "E," and "F," Capt. Tom Custer, Lieutenant Smith, and Captain Yates, respectively, were killed. This main ridge, or Custer Ridge, or Hill, as it is now usually called, is nearly three-quarters of a mile long, lies parallel to the river, and about three-quarters of a mile from it, and runs northwest and southeast. At the northern extremity of this ridge, where the Custer monument now stands, the officers and men seem to have become bunched, perhaps drawing nearer together instinctively for companionship, as their ranks grew thinner. Here fell both the Custers, Captain Yates, and Lieutenants Smith and Reilly.

A considerable number of Smith's troop "E" were found in a gully leading down to the river from the monument. Two Moon, a Cheyenne chief who fought there, informed Hamlin Garland (*McClure's Magazine*, September, 1898) that these men left the hill near the end of the fight, after Custer had fallen.

The bodies of Lieutenants Harrington, Sturgis, and Porter (not Doctor Porter, who was with Reno and is to-day living in Bismarck, N. D.) were never identified, at least satisfactorily. A skeleton found some years after the battle, not far from the battle-ground, is said to have been identified as that of Doctor Lord. There were buried on the Custer battlefield, according to Godfrey's memorandum, 212 bodies. The total casualties, as given by him, were 265 killed and 52 wounded.

The two Indians who stand out in relief as the chief leaders that day, are Gall of the Hunkpapas and Crazy Horse of the Ogallalas. There were others who bore, perhaps, nearly as prominent parts, but these two seem to stand at the head. The generalship of the chiefs and the bravery of the warriors must be admired by friend and foe,

They admit that they were surprised, and under such conditions to have wrought what they did seems, notwithstanding the disparity of numbers, to have been remarkable. As to Sitting Bull, the less said the better. He was no fighter, but a wily, scheming, cunning, malicious medicine man who hated the whites with undying hatred. When the fight began with Reno's forces, he got out of the way and made tracks for the hills as fast as he could, and did not return, the more reliable Indians say, until the Custer fight was over.

The Indians' loss has never been satisfactorily known to the whites.

There has been a great deal published regarding the Custer campaign and battles, and by those who know better, that is pure fiction and exaggeration. It is too serious a subject and the truth is hard enough to discover, without covering it up with imaginative statements for the sake of sensationalism and a little cheap notoriety.

There is not space here to discuss any of the many questions growing out of these battles. If any man ever writes the *complete story* of this campaign, not only will it be mighty interesting reading, but there will be some strange revelations covering a wide range of subjects and men.

There were practically no attempts at co-operation between Custer and Reno; Custer couldn't and Reno—well, he didn't. Some of his officers, after Benteen and McDougall had joined them, tried to communicate with Custer, really in defiance of Reno's bugled orders, but it was too late—Custer and his were dead, and Captain Weir and his troop came near meeting the same fate.

As a historical fact, Reno was tried by a court of inquiry in Chicago in 1879 for his actions on June 25th, and acquitted of the charges made. The court used these words: "* * * * while subordinates in some instances did more for the safety of the command by brilliant displays of courage than did Major Reno, there was nothing in his conduct which requires animadversion from this court." There is much discrepancy between published reports of the testimony at the Court of Inquiry and other printed articles and statements stating what occurred in Reno's command at these conflicts.

Subsequently Reno was court-martialed for another offense, found guilty and dismissed from the service in disgrace.

While Reno and Custer were battling on the 25th, the steamer Far West, and Terry and Gibbon with their little column of less than 500 men, were slowly working up the Big Horn River to the Little Horn. When Curley and the scouts, on the 26th, reported the annihilation of Custer, it cast a gloom, dismay almost, over the command. It seemed impossible to believe it. But there was no faltering, they pushed ahead with every likelihood of meeting the same fate, the Indians discovered their advance and, strange as it may seem, decamped without an effort to arrest it. On the morning of the 27th they relieved Reno's

troops, and then the wounded were cared for and the dead buried. The wounded were conveyed to the Far West and the steamer at once started for Bismarck and Fort Lincoln, where it arrived July 4th, and the first intelligence of the disaster was flashed over the wires.

Custer's annihilation is usually called a massacre. Was it? Reverse the result; would anyone then have heard of the massacre of Crazy Horse, Gall, and Sitting Bull and their braves? Hardly!

Tit for tat!

For days Custer had been riding day and night seeking these Indians, and spoiling for a fight. He got it — making the attack himself — but the outcome was not what he had expeeted. He overestimated some

Crow Indian Agency and Indian Tepees, on the Little Big Horn River, about two miles north from Custer Monument.

things and underestimated others, with the result that *he* and his immediate command were destroyed instead of the Indians. If we wish to be fair and honest in this, let us hear no more of the Custer *massacre.*

As one stands leaning against the high iron paling fence surrounding the Custer monument, one is effectively impressed with the contrast in the scene now and on that hot June Sunday when the sound, smoke, and turmoil of battle filled the air. Peaceful, quiet, and beautiful the prospect now. Down in the wide flat valley the Little Horn flows tranquilly along, and where the sun strikes it it glimmers and shines like the great scales of a huge serpent lying there in monstrous convolutions. The green, cool, dense, majestic cottonwoods follow it and mark it in its sweeping circles where the water is invisible. On each side rise the treeless hills all gullied and worn by the rains of a century. To the north, in the valley, two miles away, lies the Crow Indian Agency with the American flag flying. But that which holds us in grim fascination is the large number of small white marble grave-stones which dot the slopes. Their silent eloquence is all impressive. Words are unnecessary, imagination pictures the scene as it was twenty-five years ago.

Where each trooper fell a marble stone marks the spot, and where it was an officer the stone bears his name and rank.

Most of the officers' bodies were afterward removed, and Custer's body now rests at West Point. Lieutenant Crittenden's body lies in an enclosure over at the end of the ridge where he fell, and it is stated that Lieutenant McIntosh's body remains where it was found, and is buried down in the valley proper. I know that the spot where he fell is marked by the conventional headstone.

Traveler, visit this spot! It is worthy a pilgrimage from a distance. Take a good map of the Northwest and you will see scattered all over it little crossed sabres, signifying battles with the Indians at such points.

Forts and cantonments have been established here and there from the earliest days of the frontier, have passed beyond the period of their usefulness, been dismantled, abandoned, and succeeded by other posts, which in turn have run their courses.

Since the Custer battle, the Custer field itself, enclosed by a wire fence, has been made a national or soldiers' cemetery. From these old forts and battlefields scattered throughout the Northwest, bodies have been removed to this spot, and now occupy a considerable area of it.

From Fort Phil. Kearney, Wyo., many bodies were reinterred here, including that of Captain Fetterman, Eighteenth U. S. Infantry, who, with eighty-three others, was killed by Indians near that post December 21, 1866; among the removals from Fort Shaw, Mont., was the body of Captain Wm. Logan, Seventh U. S. Infantry, killed by a squaw at the battle of the Big Hole in 1877, between General Gibbon and Chief Joseph and the Nez Perces; from Fort C. F. Smith, Mont., the bodies of Lieutenant Sigismond Sternberg, Twenty-seventh U. S. Infantry, and others were removed, and other reinterments were made from Forts Sisseton, Totten, Pembina, Rice, Abercrombie, Stevenson, Lincoln, and Bennett in the Dakotas, and Camp Poplar River and Fort Maginnis, Mont.

There was also removed from Fort C. F. Smith a quite pretentious stone monument, some twelve feet high, erected by five companies of the Twenty-seventh Infantry to the memory of Lieutenant Sternberg and fourteen others who were killed by Indians at the hay fields near Fort Smith, August 1, 1861 or 1867. Time had almost effaced the inscriptions on the stone and it was uncertain what year was chiseled thereon. At the time of my visit there were buried on the battlefield, in addition to the victims of the Custer fight, 657 others.

As already shown, the Custer battlefield is now an epitome of all that has thus gone before; it stands now for Indian warfare in the Northwest, not alone the Custer conflicts.

Grave, Headstone, and Footstone of Capt. Wm. Logan (killed at Battle of Big Hole, Mont.), on Custer Battlefield.

AS THE TRAIN ROLLS ON

MANY and varied are the scenes that will be unfolded. Too many to specify here, yet a few of them, mostly on the main line, I would just touch upon.

WHERE THE LAKES SHIMMER.

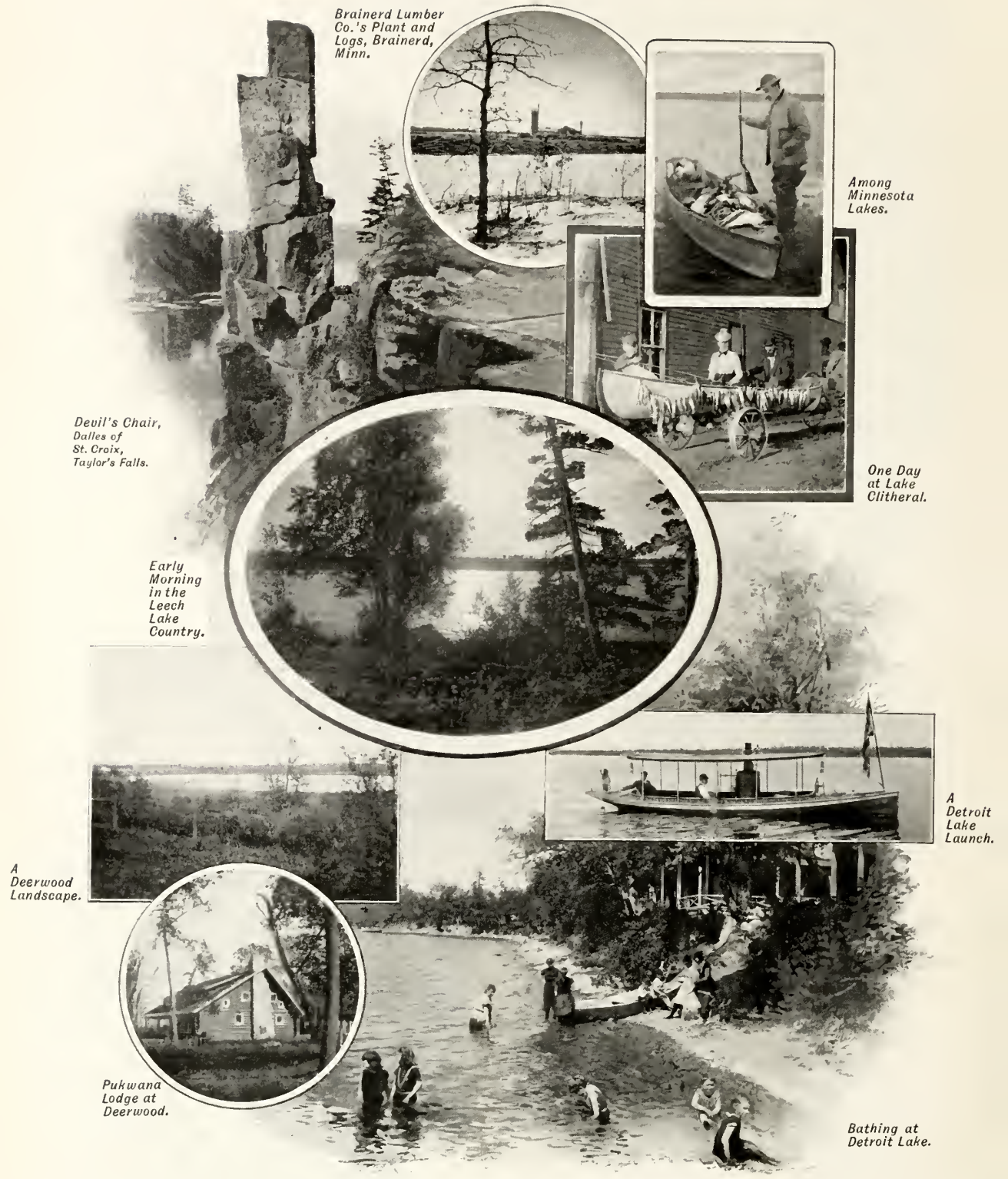
Among the undulations of Minnesota's prairies are thousands of lakes teeming with bass, pike, pickerel, and muscalonge. From the cars hundreds of them may be seen, and hundreds more are hidden among the glacier-made hills and the trees. Many of these lakes have become summer resorts, where hotels are maintained; at others good farmhouses will be found to accommodate those not over-fastidious in taste.

On the "Duluth Short Line," the old St. Paul and Duluth Railroad, now a part of the Northern Pacific System, are White Bear and Bald Eagle lakes, within a half-hour's ride of St. Paul. White Bear Lake is a large and very attractive lake, the summer home of thousands of St. Paulites. It has become noted for its sail-yachting proclivities and boasts some of the speediest, nattiest, white-winged craft of the West.

Forest Lake, Pine Lake, and Rush Lake are other hunting and fishing resorts on this line.

On a branch of the "Duluth Short Line," and near St. Paul and Minneapolis, are the beautiful Chisago Lakes, whose praises are sung by every lover of nature who has seen them. At the terminus of this branch lies Taylor's

Undressed Kids at White Bear Lake.

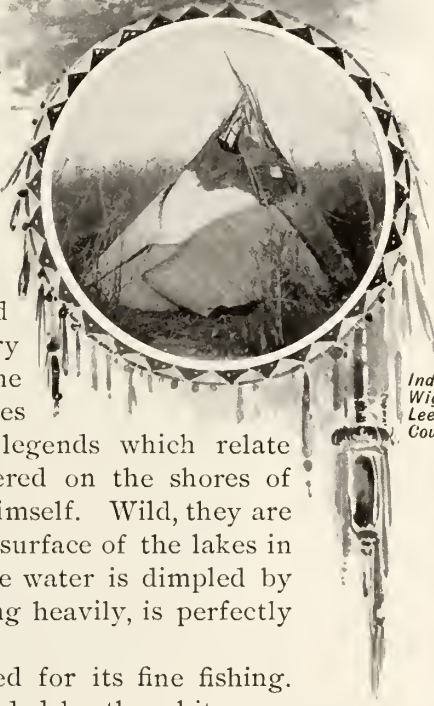

Brainerd Lumber Co.'s Plant and Logs, Brainerd, Minn.
Among Minnesota Lakes.
Devil's Chair, Dalles of St. Croix, Taylor's Falls.
One Day at Lake Clitheral.
Early Morning in the Leech Lake Country.
A Detroit Lake Launch.
A Deerwood Landscape.
Pukwana Lodge at Deerwood.
Bathing at Detroit Lake.

Falls and the Dalles of the St. Croix River, one of the most picturesque spots of rock and river in the Northwest, and noted, geologically, the world over. The massive trap rock is worn into fantastic shapes and profiles, while the deepest kettle-holes known have been drilled by water far down into the rocky bed.

An Old Ojibwa.

An interstate (Minnesota-Wisconsin) park has been established here, and improvements are being made yearly.

Leading north from Brainerd lies the Leech Lake country, traversed by the Brainerd & Northern Minnesota Railway. Indians—Ojibways—lakes, pine woods, and winding streams form a paradise where health and recreation can equally be found. For tired-out persons, victims of hay fever, and those with pulmonary complaints, the region is a sanitarium.



Indian Wigwam, Leech Lake Country.

This is all Indian country. Here in old days the Ojibway and Dakotah (Chippewa and Sioux) fought each other, the latter being finally forced to abandon the region. A large part of the country is given over to Indian reservations. One finds the evidence of the red man everywhere—in the names of streams, lakes, islands, headlands; in the legends which relate to the region; in the rude bark tepees clustered on the shores of the lakes, and in the presence of the aborigine himself. Wild, they are yet quite tame, and to see them skimming the surface of the lakes in the old-fashioned birch-bark canoe, whether the water is dimpled by the summer's breeze or the whitecaps are rolling heavily, is perfectly in keeping with the aspect of things.

Leech Lake itself is a very large lake noted for its fine fishing. Indeed the whole region has been but little invaded by the white man until quite recently.

North of Leech Lake are Cass, Winnibigoshish, Bemidji, and other lakes, while south lie Woman, Man, Pine, Gull, and Pelican lakes, and east of Brainerd are the Deerwood Lakes sparkling like diamonds and convenient to Duluth and Superior.

West of Wadena, the Fergus Falls branch leading southwest from that point, and the main line itself, cut through the very heart of the Lake Park Region, as it is termed. At Clitheral, Battle Lake, Fergus Falls—on the branch line—Perham, Frazee, Detroit and

Threshing Out No. 1 Hard Wheat in Red River Valley.

Down the Missouri River.
Above Bismarck and Mandan.

Carrying Home the Game.
Pyramid Park, N. D.

Eagle Butte, Yellowstone River.

The End of the Stalk.
Pyramid Park, N. D.

Still they come.
Pyramid Park, N. D.

Pyramid Park Cliffs of many colors.

Cranes Shot at Dawson, N. D., in one forenoon.
Heaviest, 20 pounds weight; measured 10 feet from tip to tip of wings.

On the Range in Eastern Montana.

Lake Park the lakes lie thick among the hills. Detroit is at the head of a very interesting chain of lakes extending southward.

A PRAIRIE-DOG TOWN.

To one familiar with prairie dogs, a sight of a dog town is always interesting. One who has never seen these curious

Prairie Dogs at Home.

The Land of the Prairie Dog.

creatures is always much excited upon seeing a village for the first time. The fat, sleek, pudgy little things, with their jerky stub tails, have an air of ridiculous pomposity, laughable in the extreme. Just a few miles west from Medora, North Dakota, on the Northern Pacific, beyond that

A Group of Prairie Dogs Feeding.

weird region known as Pyramid Park, or the Bad Lands, so called, is one of these villages. It lies close to the track, and passengers on the trains have a great treat in watching the antics of these diminutive animals.

They run impulsively from hole to hole with a sort of amble, stopping suddenly and sitting upright on their haunches. Then they place their fore paws together and near their noses, and take on an attitude of prayer or supplication, or even appear as if about to indulge in a little preaching. This is all done quicker than it can be told, and with an air of the utmost soberness and dignity. They flirt their little tails continually, jerk their heads about, give utterance at quick intervals to a sharp, saucy little bark, and will, in a twinkling, throw themselves head first into their holes, the stub tails giving a farewell flirt as they disappear.

The prairie dog is, strictly speaking, a marmot, and not a dog, although its general appearance is much like that of a fat puppy.

Prairie dogs, or prairie marmots, are common to nearly all parts of the great western plains, and are familiar objects to all mountaineers and plainsmen.

The animal was first technically and scientifically recognized by George Ord in 1815, who gave it the specific name *Arctomys ludoviciana*. Prof. Spencer F. Baird, in 1857, gave it its present and more appropriate designation of *Cynomys ludovicianus*. Cynomys means dog-mouse, from two Greek words—Kuown, dog, and mus, mouse. Ludovicianus is from the Latin word *ludovicus*, and indicates here that the species was first found or studied in the vicinity of St. Louis.

The dog belongs to the family of *Sciuridæ* — squirrels — which includes groundhogs or marmots on the one hand, and flying squirrels at the other end of the line.

The dogs range from thirteen to sixteen or seventeen inches in length, with tails from two and a half to four inches long.

Although the prairie dog was not christened scientifically until 1815, and later in 1857, it was known and mentioned in print several years prior to the first-named date.

As a matter of fact, Lewis and Clark saw the animal in 1804, but as there was much delay in publishing their journal, it not being printed until 1814, it gave opportunity for others to get into print ahead of them. Gass, one of Lewis and Clark's sergeants, published a journal of their trip in 1807. Under date of September 7, 1804, he records the following succinct but decidedly interesting account of what happened:

"Captain Lewis and Captain Clark, with some of the men, went to view a round knob of a hill in a prairie, and on their return killed a prairie dog, in size about that of the smallest species of domestic dogs.

"Having understood that the village of those small dogs was at a short distance from our camp, Captain Lewis and Captain Clark, with

The Rockies
South of Red Lodge, Mont.

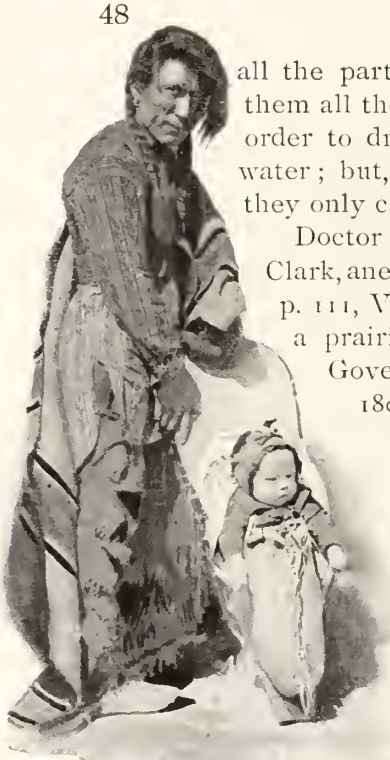
U. S. Government Fish Hatchery at Bozeman, Gallatin Valley, Mont.

Tongue River and Dam at head of a large irrigation canal, twelve miles above Miles City, Mont.

Placer Mining in Montana.

Palisades of the Yellowstone River.

Bozeman and Bridger Peak, Mont.



Him Heap Fine Pappoose.

all the party except the guard, went to it, and took with them all the kettles and other vessels for holding water, in order to drive the animals out of their holes by pouring in water; but, though they worked at the business till night, they only caught one of them."

Doctor Coues, in his monumental work on Lewis and Clark, anent their own description of this incident (footnote p. 111, Vol. I), says that the earliest notice he had seen of a prairie dog was in a *letter* of Captain Clark's to Governor Harrison, "dated Fort Mandan, April 2, 1805, and, I think, published in 1806."

He also states that Lieut. Z. M. Pike, who in 1805-7 made extensive explorations up the valley of the Mississippi to its headwaters and also into the interior of the country west from St. Louis, mentions the animal in his manuscripts, which were published in 1810, under date of Aug. 24, 1806. A copy of Pike's report, printed in London in 1811, now before me, appears, however, to make no mention of the dog.

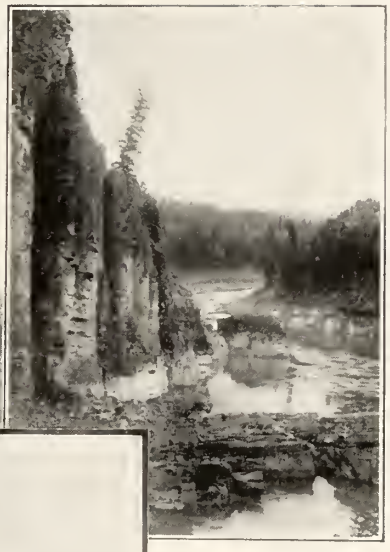
Gass' account, then, would stand as the second printed reference to this animal.

Lewis and Clark's own report (Coues, 1893, pp. 110-111, Vol. I, under date of September 7, 1804, refers to the episode related by Gass, as follows:

"As we descended from this dome we arrived at a spot, on the gradual descent of the hill, nearly four acres in extent, and covered with small holes. These are the residence of a little animal called by the French *petit chien* (little dog), which sit erect near the mouth and make a whistling noise, but when alarmed take refuge in their holes. In order to bring them out we poured into one of the holes five barrels of water without filling it, but we dislodged and caught the owner. After digging down another of the holes for six feet, we found on running a pole into it that we had not yet dug halfway to the bottom. We discovered, however, two frogs in the hole, and near it we killed a dark rattlesnake, which had swallowed a small prairie dog. We were also informed, though we never witnessed the fact, that a sort of lizard and snake live habitually with these animals. The *petit chiens* are justly named, as they resemble a small dog in some particulars, though they have also some points of similarity to the squirrel. The head resembles the squirrel in every respect, except that the ear is shorter; the tail is like that of the ground-squirrel; the toenails are long, the fur is fine, and the long hair is gray."

Lewis and Clark's own published record — 1814 — of the animal would therefore seem to come fourth on the printed list. Carver,

who made extensive explorations in the far Northwest in 1766-1768, describes the woodchuck, squirrels, beaver, etc., but seems not to mention the prairie dog, marmot, or gopher.



Cabinet Gorge on Clark Fork, Mont.

Along the Bitterroot River, Mont.

The N P. Track follows Lake Pend d' Oreille for many miles.

McDonald's Peak. Mission Range, Mont.

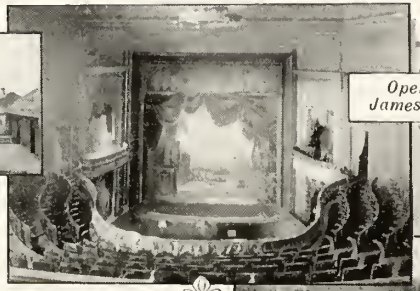
The prairie dogs live in underground colonies, some of them of large extent, requiring a long time, if on horseback, to ride through them. The village near Medora extends for some distance alongside the railway track, and it requires several minutes for the train to pass through it, and the car windows are always filled with laughing faces looking out at the dogs as the train speeds on.

On a Montana Trout Stream.

A Montana Nursery.

City Hall,
Tacoma.

Billings, Mont.



Opera House,
Jamestown, N. D.

Hope, Idaho.

Portland, Ore., and Mount Hood.

Spokane, Wash.

Missoula, Mont.

Third Avenue, Seattle, Wash.

The entrances to these underground habitations are marked by mounds of earth, sometimes quite large.

Their subterranean windings or galleries are often of great extent, and it is ordinarily deemed impossible to dig down to them or drown them out, as related by Lewis and Clark.

These animals seek sandy, sterile soil in which to burrow, far from water, of which they seem to be practically independent.

The little creatures have small cheek pouches, doubtless for carrying food, and their fore paws are admirably adapted for their burrowing operations. Their bodies are quite heavily and compactly formed for their size, and they are of a pale chestnut brown, or rather tawny color.

The fact mentioned by Lewis and Clark and others, of finding snakes, owls, frogs, etc., in the holes of these animals, gave rise to a theory that these apparently antagonistic creatures lived in peace and harmony together. Scientific men assert that this is untrue; that holes that have, for any reason, been deserted by the dogs may be and are, pre-empted by the owls—who also burrow—and snakes, but that they are all at enmity with each other.

The species *Cynomys ludovicianus* is found east of the Rocky Mountains, but a family, *Cynomys Columbianus*, is found west of that range. Lewis and Clark, 1804-6, and Doctor Parker, 1838, mentioned finding them west of the Rockies.

The animals are quite difficult to capture, but have been known to become quite domesticated. In the new Zoölogical Park at New York City there is a large village.

THREE FORKS OF THE MISSOURI.

The traveler over the Northern Pacific Railway sees the Missouri River under two greatly dissimilar conditions. At Bismarck, N. D., it is crossed on a massive, three-span, steel bridge, fifty feet above high water. Here the river is a wide, muddy, eddying, deep stream—a big river. Six hundred miles westward, in Montana, as the train, running at from forty to sixty miles an hour, swings from the Gallatin Valley into a picturesque cañon, it again strikes the river exactly where it becomes the Missouri—at the junction of the Three Forks. Here the stream is a rapid, clear, narrow, and beautiful one.

Three rivers—the Jefferson, Madison, and Gallatin—form the Missouri, and these streams were named, and the actual point at which the name Missouri should apply, determined by Lewis and Clark, the explorers, after grave consideration, in 1805.

The Madison and Jefferson first form a junction, and within a mile, and right at the head of the cañon, the Gallatin joins them. The three can be seen from the car windows.

Threshing Wheat in Palouse and Clearwater Country.

The headwaters of the East Gallatin Fork of the Gallatin River rise in the interval between the Gallatin and Bridger ranges east of Bozeman. This fork the Northern Pacific Railway follows, after crossing the first spur of the Rockies between Livingston and Bozeman, through the noted Gallatin Valley, one of the finest and most fertile in Montana.

The West Gallatin Fork, much the larger of the two, has its ultimate sources in the extreme northwestern corner of Yellowstone Park. The two branches unite at, and the main river is crossed by, the railway at Logan, the junction of the Butte Air Line with the main line via Helena.

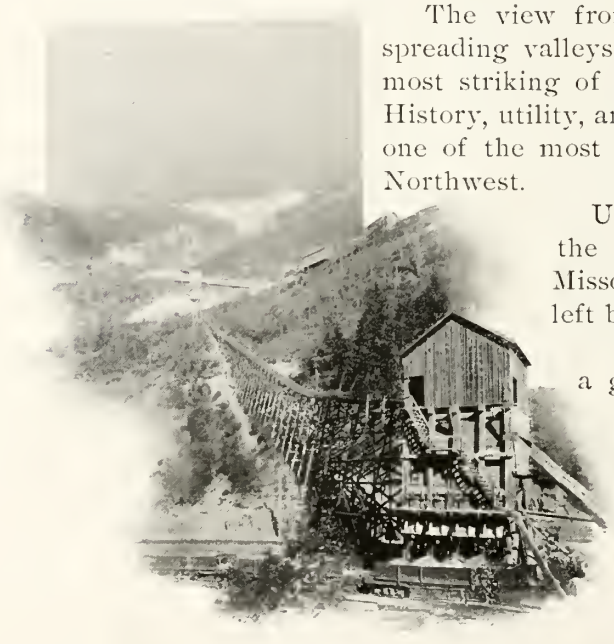
The Madison River flows almost due south for the greater part of its course to the Three Forks. A large part of its waters come from the geyser basins in Yellowstone Park, drained by the Firehole and Gibbon rivers, which together form the Madison.

The Jefferson, under the names of the Jefferson, Beaverhead, and Red Rock rivers, follows a much more circuitous course than either of the others. Its sources are found along the Montana-Idaho boundary, just west of the Yellowstone Park and south of the upper Madison.

The view from Three Forks up the wide spreading valleys of these streams is one of the most striking of the kind to be seen anywhere. History, utility, and beauty combine to render it one of the most attractive spots of the farther Northwest.

Until almost in sight of Helena, the traveler is whirled along the Missouri, after the Three Forks are left behind.

The winding cañon, while not a grand one, is yet replete with interest.



Standard Mine in the Coeur d'Alenes, Idaho.

The route via Butte follows the Jefferson River to the foot of the mountains, thence across the latter by way of the Pipestone Pass.

At Lake Crescent, N. W. Washington. Reached from Puget Sound via Port Angeles

MOUNT ADAMS.

This is one of the great snow peaks of the North Pacific coast. It is more than 12,000 feet high, and from the fact that it can all be seen it appears to be even higher. It is volcanic in its nature, conical in shape as seen from a distance, and as white as the driven snow that covers its sides.

Mount St. Helens and Glaciers. 9,750 feet elevation.

This grand peak is best seen from the Yakima Valley through which the Northern Pacific Railway is laid. Almost from the time the Columbia River at the foot of the valley is crossed by the train, near Paseo,

Mount Rainier. Elevation, 14,532 feet from Yelm Prairie.

The ride across the Cascade Range is replete with beautiful views.

the mountain comes into view, and it is then about 100 miles away. It appears to be a vision faintly outlined on the distant landscape. Anon, it becomes more clearly defined, assumes shape and entity as the train winds this way and that, showing it now on one side and again on the other. And all the time it looms up larger and grander until in the neighborhood of North Yakima it is seen at its best. It then stands out as a huge, white mountain giant regal in its appearance.

Adams is about midway between North Yakima and the Columbia River, and offers an enticing mark for the mountaineer who wishes to climb a mountain whose sides are covered with glaziers.

In conjunction with Mounts Rainier, Hood, Shasta, and others it forms the grandest set of peaks to be found in the United States.

The peaks of the Appalachians and of the Rockies are dwarfed by those of the Cascades, and they are to our own country what the great white ice-bound peaks of the Alps are to Switzerland.

Terminal moraines, glaciers, ice cliffs, and caves are all found on the slopes of Adams and its brothers. Alpenstocks and safety lines are needed in climbing their icy sides, and the man who stands upon the summit of one of these old-time volcanic peaks feels the true thrill of the Alpine climber as he gazes out over the vast landscape spread before him.

Adams is one of the few mountains that Vancouver did not sight and name after an English admiral or a friend of his, in 1792, while exploring the northwestern coasts.

Mount Adams in a Storm. 12,250 feet elevation.

THE Northwest is a region of great landmarks. This is equally true whether judged from a historic, economic, or scenic standpoint. Historic landmarks lie scattered over the plains of its history, even as do the great buttes and mountain peaks over the plains of nature. In the proverbially fertile and beautiful valleys, inexhaustible mineral deposits, and the graceful timber tresses of the mountains, will be found, as it were, economic landmarks of vast importance. It goes without saying that this is true from the standpoint of scenery. It couldn't be otherwise. But in addition to the great scenic landmarks there are portions of this Northwest now well known the world over that were once, and quite recently, so hidden in nature's bosom that even their whispered existence around the frontier campfire subjected one to sarcasm and ridicule.

I purpose here to describe somewhat, from the historic and scenic point of view, one of these latter and long secluded portions of the earth's crust.

Most conspicuous among the old landmarks or beacon points in the Northwest were the Pilot Knobs or Trois Tetons, or, as we now know them, the Three Tetons, in Northwestern Wyoming. And yet at the very feet and under the shadow of these granite peaks lay, unknown and hidden for long years, the most wonderful spot in the world,

"The Land of 'Greater Glories'" of the Northwest. Tucked away in its mountain trundle-bed it slumbered on until the age was ripe for its discovery. The living tide of explorers, trappers, and emigrants surged by and beyond it, yet, providentially, not until the time came that it was safe from spoilation was the Yellowstone Park discovered, practically, and made accessible to the public.

A HITHERTO UNKNOWN EXPLORER.

The early history of this region is now well known. There seems to be no doubt that John Colter, one of the Lewis and Clark expedition (1804-6), was the first white man of record to visit any portion of what is now embraced within or near the park boundaries. This was somewhere from 1806 to 1810, probably in 1807. James Bridger, the "old man of the mountains," saw some of the geysers about 1840-45. Captain Raynolds — not Reynolds, as usually written — was on the borders of the park-land, with Bridger as his guide, in 1860, but was unable to pierce the mountain barriers and penetrate the region itself. Captain De Lacy, in 1863, passed around Shoshone Lake and through the Lower Geyser Basin. In 1869 Folsom and Cook spent more than a month there, and in 1870 the Washburn-Doane expedition made a thorough exploration and gave us our first authentic and detailed knowledge concerning this wonderland. It is a remarkable fact that until the Washburn-Doane expedition no accounts appeared from any of these explorers that gave the public any *real* conception of what was to be found there. Even the stories of Bridger and the other trappers, who knew personally or from others of the geysers, were so told or published as to cause entire disbelief in them.

It seemed, therefore, somewhat strange that, as far back as August 13, 1842, an article accurately describing the hot springs and geysers of this region was published in the *Wasp*, a Mormon paper of Nauvoo, Ill. It is due to Mr. N. P. Langford, now of St. Paul, Minn., then of Helena, Mont., afterward the first superintendent of the park, and well known for his participation in the first successful ascent of the Grand Teton in 1872, that this article was resurrected from its sleep and placed on the record. Mr. Langford saw it and had the foresight to have it reprinted in the Helena (Mont.) *Herald* on September 12, 1872, since which time it has formed a part of the literature of the park. The *Magazine of American History* of New York also published this

On Headwaters of Green River, Wyo., Showing one of the Buttes characteristic of the region. This was a great trapping ground in the early days of the fur trade.

Jackson Lake and Three Tetons.

The "Trois Tetons," or Three Tetons, are old landmarks. The Grand Teton — the highest peak — is 13,700 feet high, and has been climbed but twice.

description entire in a contribution on the "Discovery of the Park," by Peter Koch of Bozeman, Mont., printed in the June number, 1884. Both Langford and Koch obtained the original from Mr. T. E. McKoin of Townsend, Mont. There was, however, no clew to the author of this description, and efforts to discover him have been unsuccessful until now.

In the fall of 1900, one to whom the description in the *Wasp* was unknown, called my attention to an article in an old eastern publication describing the geysers, which I at once connected with the description in the *Wasp*. A few days later there was placed in my hands Vols. II and III of the *Western Literary Messenger*, published by J. S. Chadbourne & Co. of Buffalo, N. Y., in 1842-44, when this supposition regarding the article was proved correct.

This description of the geysers was first published therein on July 13, 1842, one month prior to its appearance in the *Wasp*, by which it was unquestionably reprinted without giving credit therefor to the *Messenger*. As the name of the writer was not given in the *Messenger*, the *Wasp*, of course, could not give it.

The description, it was stated, was taken from an unpublished manuscript entitled "Life in the Rocky Mountains." Following the paper on the geysers, other extracts from the manuscript were published in subsequent numbers, still without naming the writer, until on January 11, 1843, in No. 27, the serial publication of the manuscript was begun under the following heading:

An Old Fur Caravan in the Snake River Country, Wyoming.

"LIFE IN THE ROCKY MOUNTAINS. A DIARY OF WANDERINGS ON THE SOURCES OF THE RIVERS MISSOURI, COLUMBIA, AND COLORADO, FROM FEBRUARY, 1830, TO NOVEMBER, 1835. BY W. A. FERRIS, THEN IN THE EMPLOY OF THE AMERICAN FUR COMPANY."

Here, then, we have the mystery at last revealed.

Ferris started with a party of thirty men from St. Louis on February 16, 1830. He visited the geysers May 19 and 20, 1834.

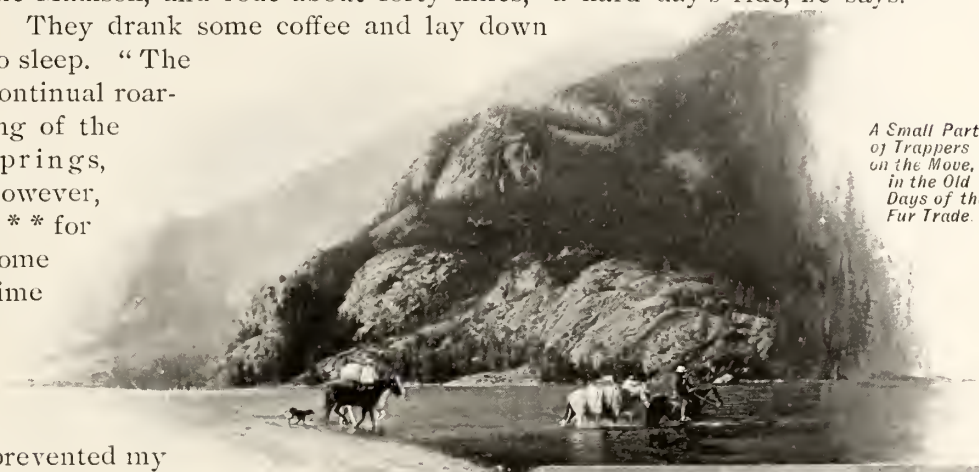
The geyser article in the *Wasp* was undoubtedly reprinted from the *Messenger*. Two facts indicate this: First, the *Wasp* published it a month later than the *Messenger* first did; second, the Mormon excitement around Western New York and Eastern Ohio and in Illinois was then high, as an inspection of the columns of the *Messenger* shows, and many Mormons were scattered through the New York and Ohio region. Through them the number of the *Messenger* containing the description of the geysers reached Nauvoo, and seeing a good thing the editor of the *Wasp* copied the matter, seemingly without giving credit for it. The original publication of this fine description should, therefore, be credited to the *Western Literary Messenger* of July 13, 1842. In No. 25, Vol. III, January 6, 1844, the description of the geyser is repeated in the regular progress of the story, with a portion of the article as first printed left out and a few lines, material in but one sense, added.

Ferris' narrative is an intensely interesting one, and valuable as well. It will, I think, without question, satisfy many better than Irving's chronicle of Bonneville's—or Bonyville, as Ferris sometimes writes it—adventures of the same period. His descriptions of scenery, Indian fights, trapper life, with its lights and shades, and his observations of various sorts, are all vivid and well told.

The title of the diary very accurately describes the region in which the fur companies operated. It will be remembered that in the vicinity of Yellowstone Park and the Three Tetons are found the ultimate sources of the Columbia, Missouri, and Colorado rivers, and this section was the center of operations of the fur companies.

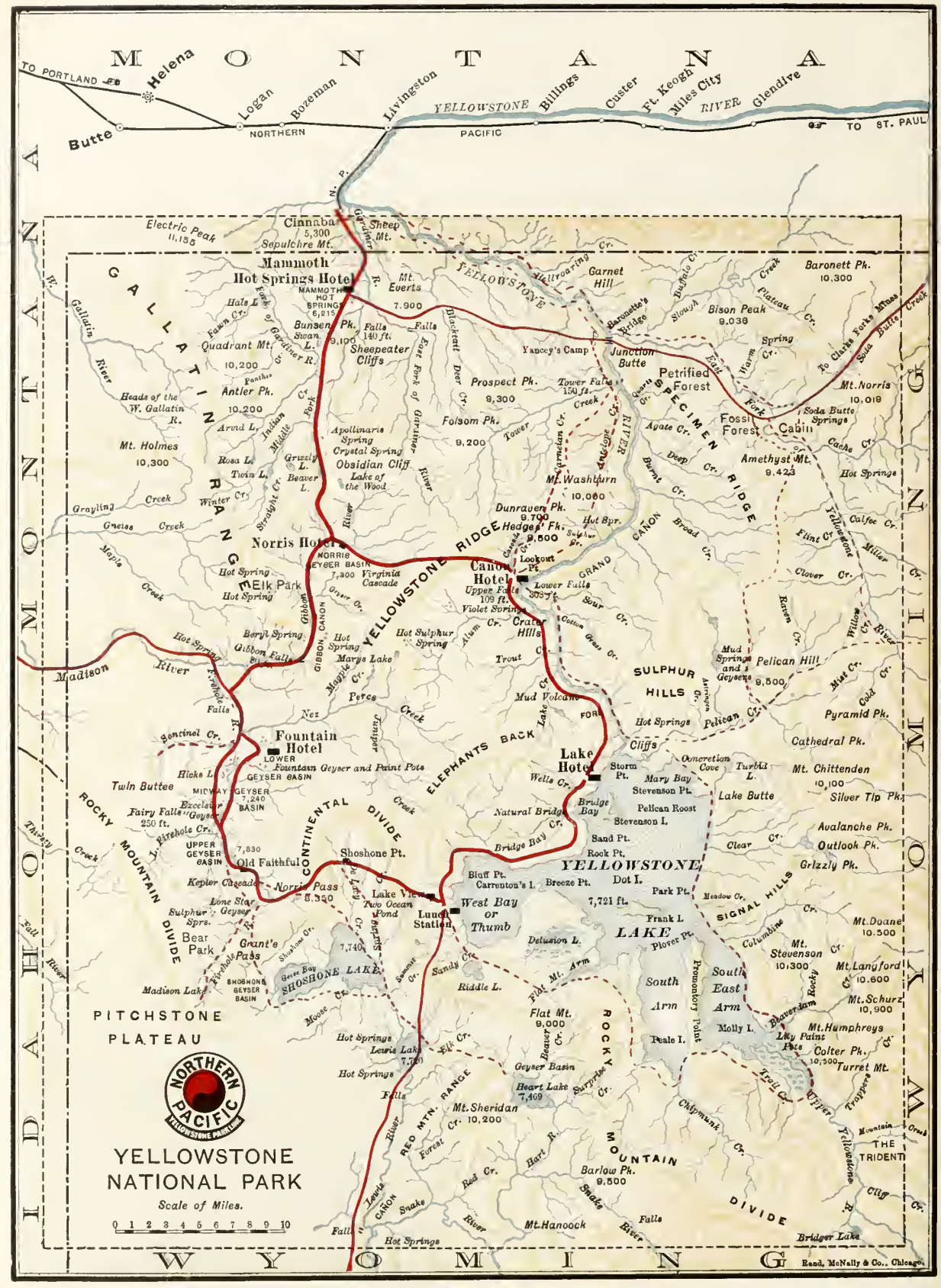
Ferris had heard, in 1833, of the "boiling springs * * * on the sources of the Madison," having "the united testimony of more than twenty men on the subject." Nevertheless, he determined to see them himself, and prevailed upon two Pend d'Oreille Indians to accompany him. Leaving his comrades after supper, May 18, 1834, from a camp, he says, about due west from the Tetons, but distance therefrom or from any other point not stated, they traveled twenty miles and spent the night at a spring "flowing into Cammas Creek." On the 19th they proceeded, "and entered a very extensive forest called the Piny Woods * * * which we passed through, and reached the vicinity of the springs about dark, having seen several small lakes or ponds on the sources of the Madison, and rode about forty miles," a hard day's ride, he says.

They drank some coffee and lay down to sleep. "The continual roaring of the springs, however, * * * for some time prevented my going to sleep," and when he did slumber he dreamed of "waterspouts, cataracts, fountains, jets d'eau of immense dimensions, etc." When he arose in the morning—the 20th of May, 1834—"clouds of vapor seemed like a dense fog



A Small Party of Trappers on the Move, in the Old Days of the Fur Trade.

A Beaver Dam.

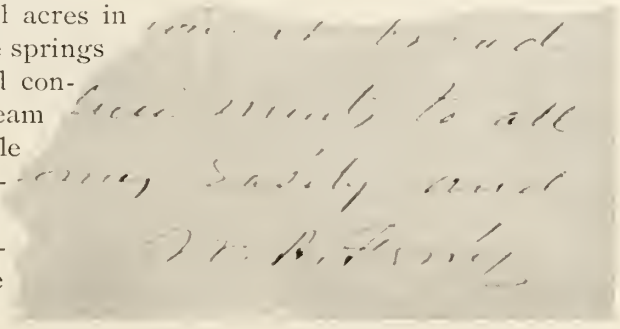

MONTANA
TO PORTLAND
Helena
Butte
Logan
Bozeman
Livingston
NORTHERN PACIFIC
YELLOWSTONE RIVER
Billings
Custer
Ft. Keogh
Miles City
Glendive
TO ST. PAUL
N. P.
IDAHO
WYOMING
Electric Peak 11,155
Cinnabar 5,300
Sepulchre Mt.
Gardiner R.
Sheep Mt.
Mammoth Hot Springs Hotel
MAMMOTH HOT SPRINGS 6,215
Mt. Everts 7,900
YELLOWSTONE
Hellroaring
Garnet Hill
Buffalo Cr.
Baronett Pk. 10,300
Baronett's Bridge
Slough
Plateau Cr.
Bison Peak 9,036
To Clarks Fork Mines
Soda Butte Creek
Bunsen Ph. 9,100
Falls 140 ft.
Falls
Sheepeater Cliffs
Yancey's Camp
Junction Butte
Spring Cr.
Warm
East Fork
Petrified Forest
SPECIMEN RIDGE
Mt. Norris 10,018
Soda Butte Springs
Fossil Forest
Cabin
Cache Cr.
Amethyst Mt. 9,423
Hot Springs
Quadrant Mt. 10,200
Hale L.
Farm Cr.
Fork of Gardiner R.
Heads of the W. Gallatin R.
Antler Ph. 10,200
Panther Cr.
Arund L.
Imlach
Middle Fork
Mt. Holmes 10,300
Rosa L.
Twin L.
Grizzly L.
Beaver L.
Straight Cr.
Winter Cr.
Grayling Creek
Grease Creek
Maple Creek
Apollinaris Spring
Crystal Spring
Obsidian Cliff
Lake of the Wood
Prospect Ph. 9,300
Tower Falls 150 ft.
Folsom Ph. 9,200
Tower Creek
Yellowstone Cr.
Agate Cr.
Deep Cr.
Burnt Cr.
Mt. Washburn 10,000
Dunraven Ph. 9,700
Hedges' Ph. 9,600
Sulphur Cr.
Hot Spr.
CANON
Broad Cr.
Flint Cr.
Yellowstone
Miller Cr.
Calfee Cr.
Clover Cr.
Norris Hotel
NORRIS GEYSER BASIN 7,300
Virginia Cascade
Hot Spring
Elk Park
Hot Spring
Gibbon Cr.
YELLOWSTONE RIDGE
Canon Hotel
Lookout Pt.
Upper Falls 109 ft.
Lower Falls 308 ft.
Violet Springs
GRAND
Sour Cr.
Cotton Grass Cr.
Crater Hills
Alum Cr.
Trout Cr.
Hot Sulphur Spring
Hot Spring
Marys Lake
Beryl Spring
Gibbon Falls
GIBBON CANON
Madison River
Firehole River
Mud Springs and Geysers
Pelican Hill 9,500
Willow Cr.
Raven Cr.
Mist Cr.
Cold Cr.
SULPHUR HILLS
Pelican Cr.
Hot Springs Cliffs
Pyramid Pk.
Cathedral Pk.
Mud Volcano
Lake
FORK
Nez Perce Creek
Juniper
Sentinel Cr.
Fountain Hotel
LOWER GEYSER BASIN
Fountain Geyser and Paint Pots
Hicks L.
Twin Buttee
MIDWAY GEYSER 7,240 BASIN
Excelsior Geyser
Fairy Falls 250 ft.
Firehole Cr.
UPPER GEYSER BASIN 7,830
Old Faithful
Shoshone Pt.
Kepler Cascade
Norris Pass 8,350
Lone Star Geyser
Sulphur Spgs.
Bear Park
Grant's Pass
Firehole Pass
Shoshone Cr.
Geyser Cr.
7,740
Lake View
Two Ocean Pond
Lucas Station
West Bay or Thumb
ELEPHANTS BACK
Lake Hotel
Storm Pt.
Wells Cr.
Omeretion Cove
Turbid L.
Mt. Chittenden 10,100
Mary Bay
Stevenson Pt.
Lake Butte
Silver Tip Pk.
Bridge Bay
Pelican Roost
Stevenson I.
Natural Bridge
Bridge Bay Cr.
Sand Pt.
Rock Pt.
Clear Cr.
Avalanche Pk.
Outlook Pk.
Grizzly Pk.
YELLOWSTONE LAKE
Dot I.
Park Pt.
Meadow Cr.
Bluff Pt.
Carrenton's I.
Breeze Pt.
7,721 ft.
SIGNAL HILLS
Frank L.
Columbine Cr.
Mt. Doane 10,500
Mt. Stevenson 10,300
Mt. Langford 10,600
Mt. Schurz 10,900
Mt. Humphreys
Lily Paint Pots
Colter Pk. 10,300
Turret Mt.
Trail Cr.
Trappers
Upper Yellowstone
Mountain Creek
THE TRIDENT
Clay Cr.
Plover Pt.
Delusion L.
Deluvion L.
Promontory Point
South Arm
South East Arm
Molly I.
Peale I.
Beaverdam Cr.
Rocky Cr.
Flat Mt. Arm
Sandy Cr.
Riddle L.
Shoshone Lake
Gere Bay
Shoshone Geyser Basin
Madison Lake
Moose Cr.
Flat Mt. 9,000
ROCKY
Beaver Cr.
Geyser Basin
Heart Lake 7,469
Surprise Cr.
Hot Springs
Lewis Lake 7,740
Elk Cr.
Falls
Mt. Sheridan 10,200
RED MTN. RANGE
Forest Cr.
Hart R.
Red Cr.
Barlow Pk. 9,500
MOUNTAIN
DIVIDE
Chipmunk Cr.
Lewis Canon
Snake River
Mt. Hanoock
Falls
Hot Springs
Bridger Lake
Rand, McNally & Co., Chicago.
GALLATIN RANGE
ROCKY MOUNTAIN DIVIDE
CONTINENTAL DIVIDE
PITCHSTONE PLATEAU
NORTHERN PACIFIC
YELLOWSTONE PARK LINE
YELLOWSTONE NATIONAL PARK
Scale of Miles.
0 1 2 3 4 5 6 7 8 9 10
WYOMING

to overhang the springs, from which frequent reports or explosions of different loudness constantly assailed our ears. I immediately proceeded to inspect them, and might have exclaimed with the Queen of Sheba, when their full reality of dimensions and novelty burst upon my view, 'the half was not told me.'

"From the surface of a rocky plain, or table, burst forth columns of water, of various dimensions, projected high in the air, accompanied by loud explosions and sulphurous vapors, which were highly disagreeable to the smell. The rock from which these springs burst forth was calcareous, and probably extends some distance from them beneath the soil. The largest of these wonderful fountains projects a column of boiling water, several feet in diameter, to the height of more than 150 feet, in my opinion; but the party of Alvarez, who discovered it, persist in declaring that it could not be less than four times that distance in height — accompanied with a tremendous noise. These explosions and discharges occur at intervals of about two hours."

Ferris saw three of these eruptions, tried the temperature of the water with his hand, to his discomfort, mentions "the disagreeable effluvium continually exuding," the hollow rumbling of the rocks, and the scare of the Indians — who thought these things supernatural and that they must be near the white man's hell. The diameter of the basin into which the waters of the largest jet fell, the one above described, he states to be about thirty feet. He adds, "These wonderful productions of nature are situated near the center of a small valley, surrounded by pine-crowned hills, through which a small fork of the Madison flows."

Ferris then goes on to describe another geyser area, evidently not seen by him, as follows: "From several trappers who had recently returned from the Yellowstone, I received an account of boiling springs that differ from those seen on Salt River [which he describes in another place] only in magnitude, being on a vastly larger scale; some of their cones are from twenty to thirty feet high, and forty to fifty paces in circumference. Those which have ceased to emit boiling vapor, etc., of which there were several, are full of shelving cavities, * * * which give them, inside, an appearance of honeycomb. The ground for several acres in extent in vicinity of the springs is evidently hollow, and constantly exhales a hot steam or vapor of disagreeable odor, and a character entirely to prevent vegetation. They are situated in the valley at the head of that river, near



Signature of Warren A. Ferris.
From an Old Letter in possession of Geo. W. Ferris, Buffalo, N. Y.

Teaching Young Bruin How to Forage.

the lake, which constitutes its source." He then describes a circular cold spring on "the margin of the lake," several feet in diameter, that shoots up, at intervals of two minutes, a column of water eight feet in height, "with an explosion as loud as the report of [a] musket."

While Ferris' description of the geysers and springs will compare favorably with any that has followed it, it seems difficult to identify, positively, the localities described.

It has generally been supposed that he visited the Upper Geyser Basin of Yellowstone Park, but to me this is extremely doubtful. The place described to him *by the trappers* closely fits that spot. It is not improbable, however, that the trappers may have vaguely described *two* or more areas, or that Ferris became confused in repeating their tale; for there is no lake of consequence near Upper Geyser Basin. Yellowstone Lake is fifteen miles east, by trail, and Shoshone Lake, formerly known as Madison Lake, and which has an important geyser basin at its southwestern extremity, is nine or ten miles southeast from the Upper Basin, and both are across the Continental Divide.

An Elk on His Travels Through the Snow.

Ferris mentions but one geyser of importance that *he* saw, and that had no cone. If he visited the Upper Basin, where the wonderful cones of the Riverside, Giant, Grotto, White Pyramid, Castle, Bee Hive, Old Faithful, and Lion are most conspicuous, it is inconceivable that he made no mention of them. On the other hand, his description of those geysers and springs seen by the trappers emphasizes the conic feature of that locality. The distance traveled would preclude his having reached the Norris Geyser Basin, and the descriptions scarcely apply to either Midway or Lower Geyser Basins as now known to us. However, it is nearly seventy

Soldiers Winter Cabin near Mud Volcano.

years since Ferris was there, and some material changes may have occurred within that time, although the well-known history of the park since 1869 would indicate otherwise. It is not unlikely that he himself saw some hot-springs area now partially or wholly inactive, or one seldom, or even never, visited since the discovery and occupation of the park. Southwest from Upper Geyser Basin, near the western boundary of the park, there are several groups of hot springs, outside of the usual lines of travel.

But what he saw is really of slight consequence. That he saw the wonderful phenomena of that locality is clear, and that he described it—qualitatively, well and faithfully, is equally true; and he now stands forth in his own name as one of the earliest explorers of the wonders of the park region, and as the *first one* to have put into print a trustworthy description of them. Let him now be placed with Colter, Bridger, De Lacy, Folsom, Langford, Doane, Hayden, Norris, and others on the roll of honor of Yellowstone Park explorers.

Ferris remained at the Hot Springs but one forenoon, and on the afternoon of May 20, 1834, recrossed the "Piny Woods," camped on the plains at Henry's Fork, and rejoined his comrades the day following. His narrative shows that he continued to trap in these same general localities for a year and a half longer, and the journal abounds in beautiful description, common-sense observation, vivid characterization of their lonely wanderings, accounts of fights with the Blackfeet, feeling narration of the death and burial of loved comrades, and amusing incidents, from all of which I might quote *ad infinitum* did space permit.

Warren Angus Ferris, of Quaker parentage, was born at Glens Falls (presumably), N. Y., December 26, 1810. About the beginning of the War of 1812, his parents removed to Erie, Pa., where his father, Angus Ferris, became one of the earliest owners of vessels on the Great Lakes, and was engaged in furnishing supplies to the American army. The father died at Erie, September 10, 1813, the day of Perry's victory at Put-in-Bay, and in 1814 the widow and her two children removed to Buffalo, N. Y.

Young Warren received a good education for that day and became a civil engineer. He was evidently of an adventurous turn, and, as already shown, in 1830 joined the American Fur Company at St. Louis.

He removed to Texas at an early day, after his return from the mountains, married and brought up a family, did not serve in the Confederate army during the Civil War, being too old, and died near Dallas, Texas, February 8, 1873, nearly sixty-three years of age.

His homestead was at Reinhardt, some six miles northeast of Dallas, but there is little left to mark the home or final resting place of the wandering old explorer and pioneer. Ferris was an authority, in the section where he lived, in his profession, and was known, as one who knew him puts it, "as a man of great and varied attainments." He

found time to write a good deal for the press, concerning his wild western life and adventures. The latter seem to have taken strong hold of him, and he even indulged, occasionally, in attempts at poetry descriptive of it, which, if it lacked the proper finish, was certainly imbued with the genuine spirit and flavor.

Ferris, doubtless, had no idea that the description he penned of the geysers would eventually be resurrected and preserved; that the region itself would become one of the most noted in the world, and that his connection with it, through his writings, would also become a memorable and historical one to future generations.*

THE TOURIST AND THE PARK.

The tourist leaves the train at Cinnabar, fifty-one miles south from Livingston on the main line. There he boards the stanch, open Concord coaches, made specially for park travel. A seven-mile ride brings him to Mammoth Hot Springs, from which point the circle tour of the park is made.

On this ride, after passing Gardiner, a hamlet at the very edge of the park, the road follows the beautiful Gardiner River — what a trout stream! — past Eagle Nest Crag, the mouth of Boiling River, and Fort Yellowstone, stopping at the large hotel, which has accommodations for 150 guests.

Luncheon over, the afternoon is passed in viewing the Hot Springs terraces, the principal objects of interest there.

The following morning the coaches and tourists start for the Lower Geyser Basin. About four miles away lies Golden Gate. The Government has recently completed a new and splendid road to this point. It winds along at an easy grade and carries the tourist right through one of the most interesting fields of mammoth, angular, half-buried, silver-gray rocks one ever saw. At one point in this giant's garden of rocks the road winds through Silver Gate. At Golden Gate itself great changes were made in 1900. Captain Chittenden, the engineer officer in charge of road construction, tore out the old wooden bridge or trestle there, and replaced it with a wider, more substantial structure, built upon concrete arches. Old travelers through the Gate would

The Start Through the Park, from Mammoth Hot Springs.

*For patient assistance in endeavoring to unearth the facts regarding W. A. Ferris' life and death, the writer is under obligations to the *Express*, Buffalo, N. Y.; Geo. W. Ferris, Buffalo, N. Y., a nephew of the old pioneer; the *News*, Dallas, Tex.; Mr. Royal A. Ferris and Judge Kenneth Foree of Dallas, and particularly so to Mrs. Mary R. Norton of Dallas and Mrs. E. H. Ferris Horner of Kaufman, Tex.

Silver Gate,
Between Mammoth Hot Springs and Golden Gate.

Golden Gate,
Showing concrete arches of the New Bridge.

Golden Gate,
Showing roadway since reconstruction.

Roaring Mountain,
Near Norris Geyser Basin.

Obsidian Cliff,
A cliff of natural glass. Shows columnar structure and glass road at foot of cliff.

hardly know the place now. This wild cañon glen is one of the spots dear to the tourist, and at its upper end Rustic Fall glides gracefully over a ledge in a filmy, veil-like sheet.

Beyond lies the open, mountain-encircled Swan Valley and Lake and then comes Willow Park and Apollinaris Spring.

Twelve miles from the starting point, one of the greatest curiosities of the park is reached. Ordinarily, Obsidian Cliff would not attract one's attention, but when it is known that it is a real cliff of nature's glass and that the road at its base is a glass road, the situation is changed. Below the big cliff lies beautiful Beaver Lake with its dams and beavers.

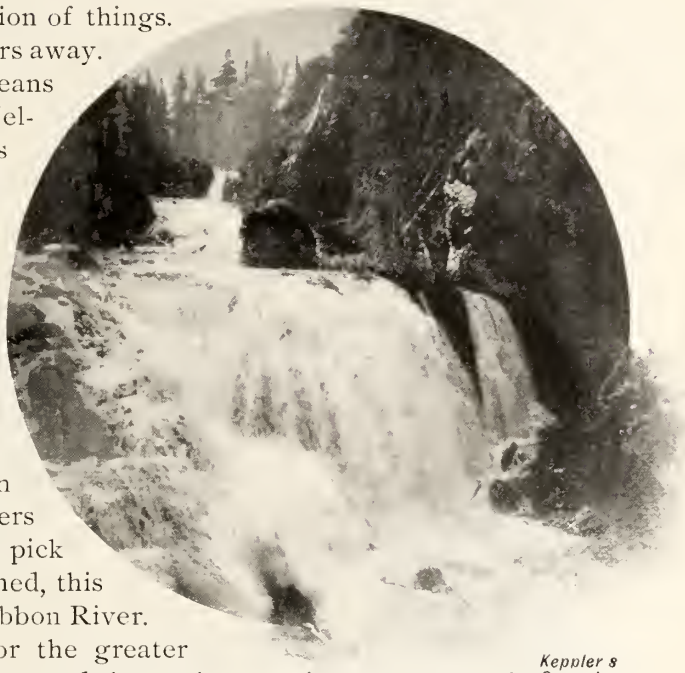
Mammoth Paint Pots, Lower Geyser Basin. Showing the boiling clay globules.

Then follow Twin Lakes at the right side of the road, wonderful little lakes and entirely unlike, and at the left side Roaring Mountain, which now seems to steam, not roar, as it may once have done.

Just beyond is seen the Devil's Frying Pan, one of the first evidences the tourist sees of the peculiar hydro-thermal characteristics of the region, and not far from Norris Geyser Basin. A shallow hot-water streamlet crosses the road, and at the right, in a sandy basin in the bed of the stream, is the Frying Pan. It consists of a limited sandy area covered by a thin sheet of water, where a continuous sizzling and sputtering similar to boiling grease in a frying pan, is going on. The water is clear, and yet at different points green and yellowish water streamers are seen. A strong sulphurous odor is prevalent, and one is

apt to imbibe an uncanny notion of things. This feeling, though, soon wears away. The Frying Pan is by no means a prominent figure among Yellowstone Park objects, but its location impresses itself upon one so that it is probably never forgotten by the majority of tourists.

The Norris lunch station is reached at noon, and after the eatables are stowed away the tourists stroll over to the Geyser Basin itself, and, after spending an hour or more in looking upon the first geysers found en route, the coaches pick them up and the ride is resumed, this time along the banks of the Gibbon River.



Keppler s Cascade.

The afternoon's ride is for the greater part beside beautiful streams and beneath towering cañon walls. After leaving the Gibbon Cañon and river, soon after Gibbon Fall, eighty feet high, is passed, the road reaches the Firehole River at the Cascades, which stream it follows almost to the Fountain Hotel at Lower Geyser Basin.

This hotel, one of the largest in the park, will hold 250 guests, is quite homelike, and has the natural mineral water from one of the hot springs piped to it for bathing purposes.

This basin is the largest of the geyser basins, although it does not contain the greatest number of geysers.

It will pay one to arise early in the morning, walk out to some point that commands a good view of the locality, and see the myriad streamers, columns and clouds of steam that rise from springs and pools. From all points of the basin proper and from many places in the depths of the forest that covers the hills in the distance, these white wraiths can be seen floating airily upward until finally dissipated.

Near the hotel are the Mammoth Paint Pots, a large circular basin of mushy, finely granulated clay. This has been boiling for centuries, perhaps, and in its sluggish action it produces figures of perfect clayey flowers of rare beauty.

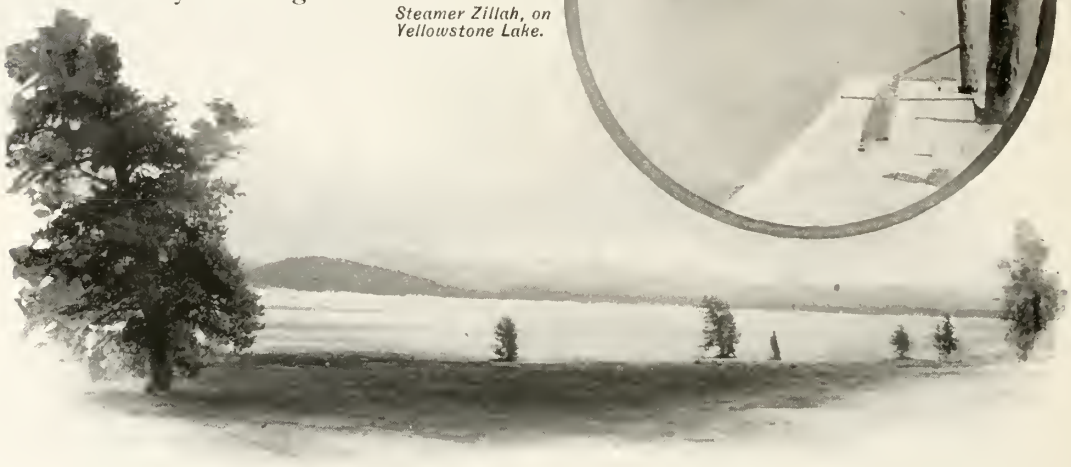
The tourist will here see the Fountain and Clepsydra geysers, and not far away is the Great Fountain geyser. A special arrangement and trip must be made to see the latter, but it should certainly be seen.

The third day of the tour the tourist spends in viewing the wonders of Midway and Upper Geyser basins. At the former, Prismatic Lake,

Turquoise Pool, and the crater of Excelsior Geyser are visited; the latter is the real home of the geyser, and there are found Old Faithful, Grand, Oblong, Bee Hive, Riverside, Giant, Lion, Lioness, Castle, Giantess, and many others. Beautiful pools are scattered here and there, too, Morning Glory, Sunset Lake, Black Sand, Punch Bowl, and Emerald Pool being the more noted.

Returning to the Fountain Hotel for the night, an eruption of either the Fountain or Great Fountain geysers may usually be witnessed, sometimes by moonlight.

Steamer Zillah, on Yellowstone Lake.



Yellowstone Lake and Absaraka Range East of Lake.

Early on the morning of the fourth day the coaches are off for the trip across the Continental Divide and on to Yellowstone Lake. Again the Upper Basin is traversed and then the ascent begins. Past Keppler's Cascade, along the upper Firehole River, through shady woods, up Spring Creek Cañon to Isa Lake, and the Divide is reached at an elevation of 8,240 feet above the sea. Then on to Shoshone Point, where Shoshone Lake and the Three Tetons are seen at the same time, in the distance, and again the Divide is crossed at an elevation of 8,345 feet, and the road then leads downward to the lunch station, under canvas, at the west arm of Yellowstone Lake.

Here are more Paint Pots, also Hot Spring Cone, where one catches his fish in the cold lake, cooks him in the hot water in the cone, and if he wishes, eats him, all without moving from one spot.

This lake is the highest large body of water in this country, and there is but one, or possibly two, in the world that lie at loftier altitudes, so far as known. The lake has an elevation of more than 7,700 feet, and is situated well down toward the southeastern corner of Yellowstone Park. It is a peculiarly shaped body of water about

twenty miles long and nearly sixteen miles wide, extreme measurements, with long arms and bays, and is surrounded by mountains.

Historically, the lake is one of the most interesting portions of the park. Colter, the first white man known to have been in the region — about 1807 — followed around its western shore. Everts, lost on its south shore — in 1871 — also tramped along its western edge and was rescued at last nearly dead, after thirty-seven days of peril and starvation; and the Washburn party — in 1871 — traveled around the north, east, south, and southwestern sides of the lake.

Mount Sheridan, which from the southwest overlooks the entire lake, was named after General Sheridan, who, with President Arthur, went through the park with a large expedition; Mounts Doane and Langford on the southeast were so called after members of the Washburn party; Mount Stevenson and Stevenson Island were named after James Stevenson of the old Hayden survey.

The lake is an enlargement of Yellowstone River, which rises southeast of it, flows through it and leaves it near the Lake Hotel at the north end.

The average depth of water is about thirty feet, according to Chittenden, but at places it is several hundred feet deep. The tourist route follows the west side of the lake, and there is also a little steamer on the lake for use of tourists.

The Lake Hotel, which will easily accommodate 125 people, is really the most restful stopping point in the park tour. It overlooks the lake and mountains, and the surroundings are pleasant. A feature of all the hotels is the wild-flower decoration of the dining rooms. The park flora is very fine and varied, and large bunches of fresh flowers are placed on the dining tables each day.

The fifth day's ride is a decided contrast to that of the fourth day. No mountains to climb, and the road clings for nearly every mile of the way to the Yellowstone River.

If one is piscatorially inclined he has arisen early this day and rowed down to the outlet of the river, not far from the hotel, and enjoyed casting his line for salmon trout, which abound.

The first object, out of the ordinary, met on this day's ride, and one of the most peculiar in the park, of its kind, is Mud Volcano.

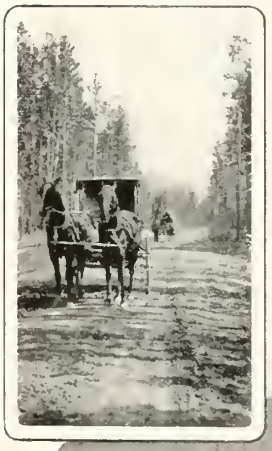
Yellowstone Park is nothing if not many-sided in its phenomena. This fact is apt to be overlooked. While the geysers are unquestionably the most peculiar of its children, and the Grand

Mud Volcano.

Cañon the most profound, the rivers, lakes, falls, valleys, mountains, springs, fish, animals, etc., are extremely important parts of the whole.

The mud springs, lakes, and pools are many and varied. They are scattered at several places in the park, and the most conspicuous of them is Mud Volcano. This is a yawning cavern in a hillside overlooking Yellowstone River, about eight miles from the hotel at Yellowstone Lake. Near it there used to be a geyser, called Mud Geyser, and the two are apt to be confounded. The geyser gave out long since. When first known, some thirty years ago, Mud Volcano was indeed what its name implies. It hurled forth nauseous showers of dirty water and mud, spattering it over the trees, rocks, and hillside in large quantities. Its retchings were violent, and it was dangerous for one to approach it.

For years it then assumed a more tranquil state, still belching, though with much less force. It then again resumed its former activity, but only for a time. Usually it is quite approachable, and although not what might be called attractive, it is still an object of interest to the park sight-seer. The volcano is forty feet wide at the mouth, tapering, conelike, to a narrow hole deep down, and running into the hill. It is but a short walk from the road, and easily visited. The coaches always stop for tourists to see it. The ride along the river is full of pleasant surprises. The road winds across the foot of Hayden Valley, the largest valley in the park. It was formerly a haunt of the buffalo, and large herds of elk now frequent the head of it.

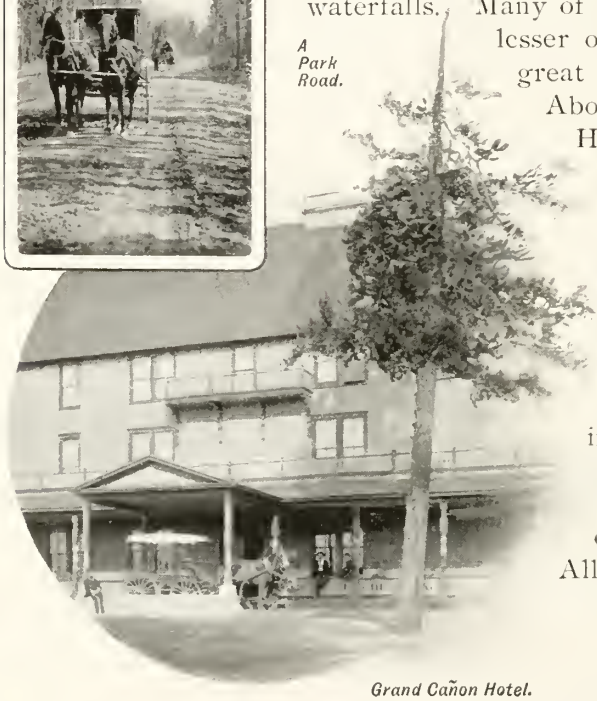


A Park Road.

When thinking of Yellowstone Park, one naturally thinks more particularly of fine cañons, geysers, and waterfalls. Many of what are popularly considered as lesser objects of importance are really of great beauty and interest.

About midway between the Lake Hotel and the Grand Cañon Hotel, at the foot of Hayden Valley, stands Crater Hills or Sulphur Mountain. This is a low, double-peaked hill, at the base of which the road runs. By the roadside is Chrome Spring, a vat of furiously boiling sulphur. The spring is some ten or fifteen feet in diameter, and the sulphur is splashed about continuously, and to a height of from two to ten or twelve feet.

All the delicate shades of sulphur



Grand Cañon Hotel.

yellow are found here, and the odor of sulphur is strong. Small cracks and holes penetrate the mountain, from which come sulphurous fumes, and sulphur crystals can be picked off the ground.

The spring is one of thousands of various kinds in the park, yet its character and marvelous delicacy of color impart to it an individuality that cause it to be always remembered.

Just beyond it is a rather large mud lake, which performs an important office right there, by the contrast afforded between lake and spring.

The coach soon reaches the rapids of the river; then quickly follow in succession the Upper Fall, Cascade Creek and Fall, a glimpse into the Grand Cañon, and then the vehicle draws up, just before luncheon, at the Cañon Hotel, capacity 250 tourists, and one is ready to view the *greatest* glory of the park, to which the afternoon is devoted.

A large number of tourists arrange to remain here another day or two. This enables them to see the cañon and falls more thoroughly, have a little fishing, and ride to the top of Mount Washburn and enjoy a view from the most centrally located and most easily accessible high mountain in the park.

The sixth day in the regular tour the coaches leave later than usual. This gives one an opportunity of going out in the early morning to Lookout Point and seeing the Cañon and Great or Lower Fall before or during sunrise, and it is a sight well worth seeing.

In doing this one should wrap up warmly, for the walls of the gorge are bathed in heavy mist from the falling waters.

On the return journey, after leaving the cañon, the Wedded Trees, Devil's Elbow, and Virginia Cascade are seen, and lunch time finds us once more at Norris and Larry's. The first half-day's route is then retraced, dinner eaten at Mammoth Hot Springs, and evening finds us aboard the cars at Cinnabar, homeward bound.

ELECTRIC PEAK.

In approaching Yellowstone Park from Livingston the traveler's attention is drawn to two particularly striking peaks, besides Cinnabar Mountain and the Devil's Slide, one on either side of the valley.

The first of these is Emigrant Peak, to the east and well up in Paradise Valley; the other is first seen, in anything like its grand proportions, just before reaching Cinnabar, and its name is Electric Peak. The latter is the highest of all the mountains immediately surrounding the park or which are a part of it. The height of Electric Peak is 11,155 feet above sea level. Mounts Washburn, Sheridan, Emigrant Peak, Mount Doane, etc., are all lower than this. The Grand Teton, however, some miles south of the park boundary and overlooking the beautiful Jackson Lake country, is more than 2,000 feet higher than Electric Peak.

Electric Peak. *From near head of Golden Gate, showing southern face. The central and pronounced ridge is the one used in making the ascent.*

The greater portion of Electric Peak is north of the north line of the park. Its highest point is not far from the boundary and as the southern slope is very acute, the mountain may well be termed the great sentinel or watch-tower of the park.

From Cinnabar it will at once be noticed that a long, regular slope and spur extends northward from the apex of the peak. In ascending the mountain from this direction, one can probably ride a horse nearly to the extreme top, but this is mountaineering of a rather poor sort.

Electric Peak acquired its name in a highly characteristic and peculiar manner. In July, 1872, Mr. Henry Gannett and others of the old Hayden survey were ascending the mountain when a thunderstorm burst upon them. They were then nearly to the summit. The electricity was so strong that they heard a crackling sound as of sparks flying from a friction machine. The current began to pass through the men's bodies, a tingling sensation was felt in their fingers and heads and the tumult was deafening. One of the men was severely shocked and the party was at last compelled to retreat several hundred feet down the mountain, and even then they still felt the prickling sensations and heard the crackling of the electricity.

The whole park is interesting geologically, and this is just as true of the locality about Electric Peak as elsewhere.

An open sea once occupied this space; sedimentary rocks in great beds and in regular sequence were laid down; volcanic eruptions followed, with periods of rest and erosion between them. Following these came a glacial age when a tremendous ice sheet covered the hills and filled the valleys. One wing of it came from the Gallatin Range, of which Electric Peak is a part, and plowing eastward across Swan Valley swept over Terrace Mountain, on the eastern slopes of which the Mammoth Hot Springs are now found. Another wing came from the mountains bordering the eastern line of the park, followed down the valleys of the east fork of the Yellowstone or Lamar river and the Yellowstone River, pushed westward over Mount Everts and there joined the Gallatin Range ice sheet. From the deep bowl now formed by Electric Peak, Sepulchre Mountain, Bunsen Peak, and Mount Everts, the consolidated glacier jammed its way northward down the Gardiner and Yellowstone rivers into Paradise Valley, which is strewn with morainal débris deposited there as the glacier, known as the Yellowstone glacier, melted.

When, therefore, the tourist, standing on the ample veranda of the big hotel at Mammoth Hot Springs, looks out upon the scene before him, he really sees something more than a beautiful mountain picture, with soldiers' barracks and the spectacular hot springs in the foreground, and Bunsen Peak, Mount Everts, and the more distant peaks over near the Grand Cañon in the background. He is gazing upon a

spot where the gigantic forces of nature have fought a great fight, where a supreme struggle for mastery occurred between water, fire, and ice, and where each, in turn victor, at last gave over the conflict, and erosion, the commonest force of all, perhaps, occupies the battle-field as final master.

A suitable introduction is usually of advantage to one. Let us, therefore, endeavor to obtain one to the park by climbing Electric Peak, and from its rocky height cast our eyes over the great Wonderland somewhat after the fashion of a bird's-eye view.

Steaks and Roasts on the Hoof. Intended for Yellowstone Park Hotel Guests.

We obtain good saddle horses from the transportation company and start out in the early morning, taking the old road that climbs Terrace Mountain and debouches into Swan Valley through Snow Pass. This road leads us past the Giant's Thumb, the now exquisite Cleopatra Terrace, and Orange Geyser. As we ride along, the kaleidoscopic terrace fronts, with their clouds of steam hovering above them, give a greatly changed appearance to the springs, as compared with what they are when the sun shines upon them and dissipates the steam.

After a right stiff climb over the terrace formation and through the trees, we enter Snow Pass, a short and narrow opening between Terrace and Sepulchre mountains.

We have a ride of some eleven or twelve miles ahead of us, to where we dismount from our horses and make the rest of our way afoot, and we are now fairly started.

Crossing the head of Swan Valley we ride up and on to a ridge that, with some undulations, stretches down from Electric Peak. By riding across to the farther side of the ridge, the peak comes into full view and it is an easy matter to keep it thus, and by so doing lose no time in unnecessary deviations from the straight and narrow way, for there is a dim trail to be seen here and there. We gradually rise in altitude

Off the Beaten Trail in Yellowstone Park.

as we slowly ride along, and after a ride of perhaps eight miles, we are in the midst of interesting surroundings. Across the valley to the west lies the main Gallatin Range; straight ahead looms Electric Peak, in appearance like the inverted prow of a vessel; at our right, overshadowing us, rise the black, shaggy, timbered flanks of Sepulchre Mountain. At our left, far below us in the bottom of the narrow valley, which farther up becomes simply a ravine formed by the slopes of the Gallatin Range and Sepulchre Mountain, the Gardiner River dashes along. The ultimate sources of this stream are in a big amphitheater on the western side of Electric Peak. It then flows south through Swan Valley, winds around Bunsen Peak, and, turning at right angles, flows north past Mammoth Hot Springs and into the Yellowstone near Gardiner City. Up here among its free mountain wilds it is a tempestuous, brawling torrent. The warm summer sun is rapidly melting the snow banks on the mountains, and the little discolored stream is running pretty nearly banks full.

When we reach the foot of the great peak itself, we climb, now in the saddle, now afoot, as the pitch of the trail suggests, as high up as it is possible to take our horses. It is only about 300 feet to the last stunted timber, and, dismounting, we relieve the animals of their saddles and tie them in the shade of the trees.

And now comes the real pleasure and joy of the occasion to the genuine mountaineer. There is going to be no boy's play about it. There is hard, panting, muscle-straining, leg-weary work ahead, and the soft, flabby, namby-pamby tenderfoot has no place here. But for him who can enjoy a real hard, healthy tug of war—ah! he will be in his element and enjoy the struggle he sees confronting him.

We go slowly, for it is a steep pull right from the start, and frequent doses of rest are necessary at first. Then as our breathing apparatus, heart, and muscles become accustomed to the strain, we are able to make longer distances between halts.

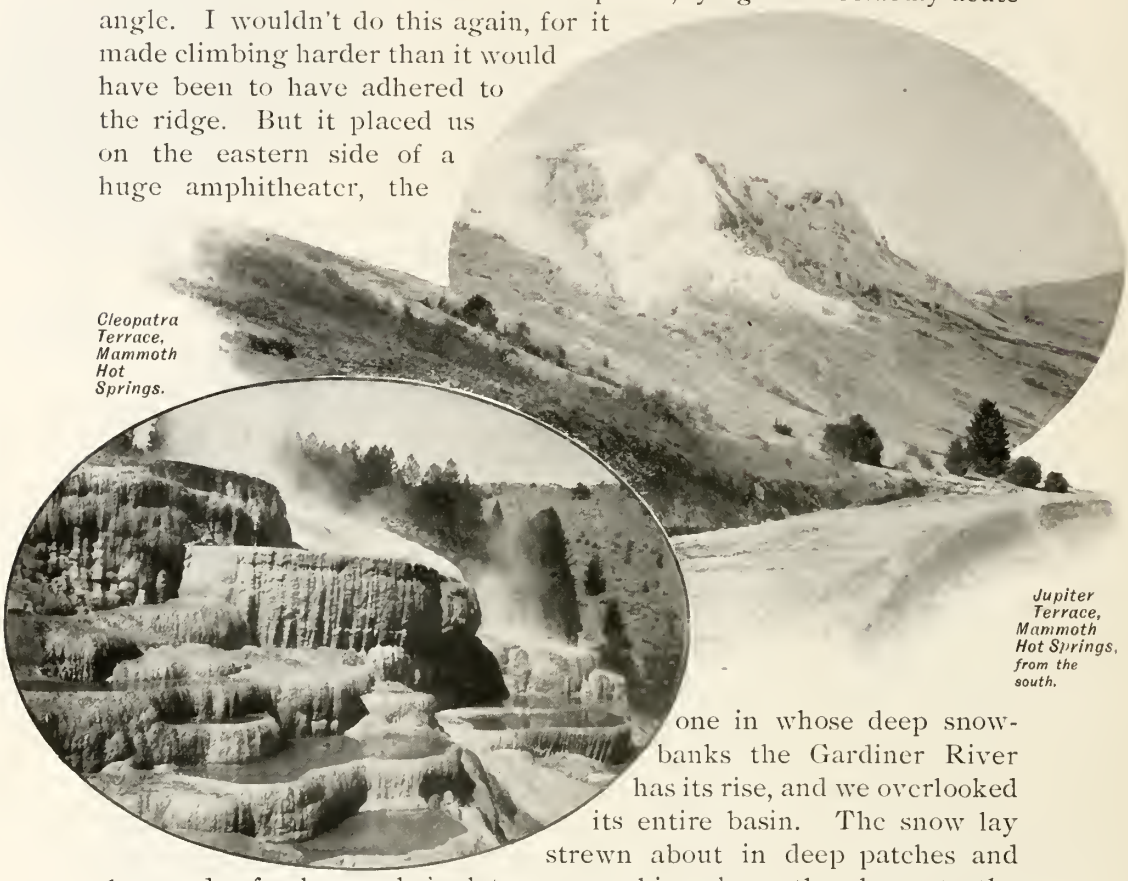
The real mountain climber has no false modesty about climbing slowly and stopping frequently. In this way he conserves his strength and in reality advances more rapidly, and at no risk to life or limb.

One of the most interesting things about mountain climbing is to note the unfolding of the landscape as one ascends higher and higher, and this was a feature of our climb here.

After we had reached a point a thousand feet, perhaps, above our horses,

Devil's Slide, Cinnabar Mountain, from Car Window.

we swung around to the western side of the mountain, which was a vast field of slide rock in rather small pieces, lying at a decidedly acute angle. I wouldn't do this again, for it made climbing harder than it would have been to have adhered to the ridge. But it placed us on the eastern side of a huge amphitheater, the one in whose deep snow-banks the Gardiner River has its rise, and we overlooked its entire basin. The snow lay strewn about in deep patches and thousands of ephemeral rivulets were rushing down the slopes to the deeper channel below. The roaring of the stream was plainly audible to us, even though we were 1,200 or 1,500 feet above it.



Cleopatra Terrace, Mammoth Hot Springs.

Jupiter Terrace, Mammoth Hot Springs, from the south.

To the south, the great parkland began to unfold itself. Swan Valley stretched far away southward, while right at our feet Sepulchre Mountain disclosed an undulatory and contrasted bit of picture land before unsuspected. Forest, lake, meadow, and cliff vied in forming a cool and cheery landscape.

Several hundred feet below the summit we reached the base of a large buttress of rock, a part of the ridge. We here left the angular slide rock and climbed up the buttress, quite vertical for much of the way, until we were again on the firm, adamantine ridge. The latter narrowed to a very knife edge. We rested again, and then started up the last 300 feet that lay between us and the top. It was "a rocky road to Dublin," but the footing was unyielding and sure. The first few yards were made sitting astride the very narrow ridge and lifting ourselves ahead on our hands, after the fashion of playing

leap frog, save that the "leaps" proper were conspicuously lacking. It was then a straight climb to the top over hard and jagged rocks and we were but a few minutes in accomplishing it.

There was no real danger in this last bit of climbing, just enough semblance of it to lend a dash of spice and variety to the sport.

The summit was a small rounded knoll as bare of life or verdure as a tree of leaves in winter. Indeed, from the spot where we had left our horses there was no green thing to be seen on the mountain except as we saw it in the slopes and gulches far below.

It was a wide scope of country that was unrolled around and beneath us. The relation of parts to a whole was patent at a glance.

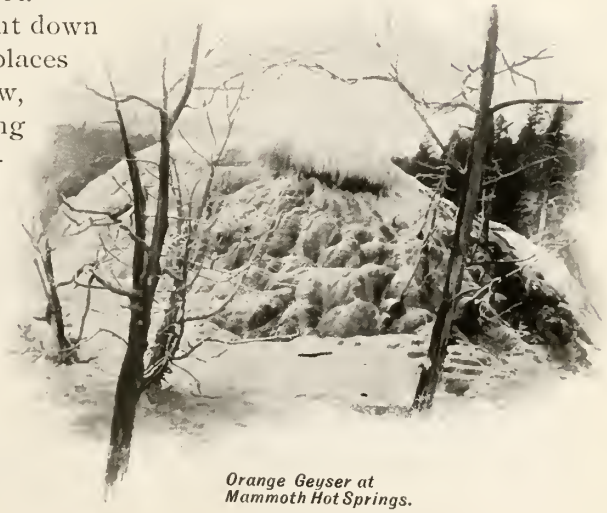
From the Three Tetons 100 miles to the south, to Emigrant Peak, fifteen or twenty miles north of us, and from the Absaraka Range, east of the park, to the farther Gallatins just west of us, the land was open as a scroll.

At our feet lay Gardiner City, Cinnabar, Cinnabar Mountain with its red slide of the devil, the Yellowstone River and valley, all much flattened by our elevation. The mountains around Emigrant Peak closed the view to the far north. To the east, the peaks along the eastern park boundary stood out like whitened nodules, touched with the winter's snow as they yet were. Down in the heart of the park Mount Sheridan, Dunraven Peak, Mount Washburn, and Yellowstone Lake were all visible, while near at hand Bunsen Peak appeared like a wart or a large mole hill, and the Tetons, far away, loomed up, the great white giants of the whole region as they indeed are, always have been, and probably always will be. The geyser basins were somewhat hidden by the land waves and timber, but were it early morning or evening the steam clouds would easily have revealed their hiding places. From our perch the sides of the peak on which we stood fell away in palisades several hundred feet high, to the more natural and usual angular slopes below them.

We had climbed at least 2,000, perhaps 2,500, feet afoot, and naturally, fresh from office desks, were not hardened to such work, but an ambition of many years' standing was at last gratified and little we minded the stress and strain of the effort.

Our descent was a rapid one, straight down the comb of the ridge. At one or two places we encountered long, deep beds of snow, and we plunged through them with long strides. Our ride hotelward was a repetition of the outward one and we reached the hotel in ample time for dinner.

Twenty-two miles of riding and 5,000 feet of climbing the first day of



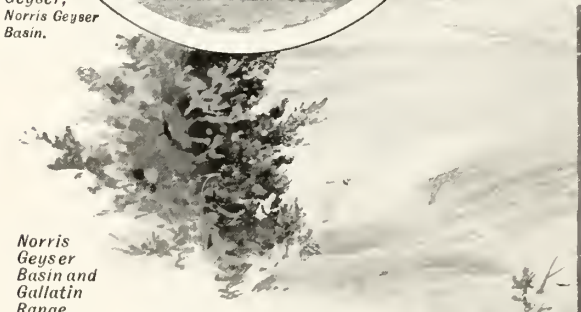
Orange Geyser at Mammoth Hot Springs.

an outing left one a little stiff in the "jints" and muscles, but a night's rest and a morning bath rejuvenated me and I rode away southward through the park the succeeding day mounted on a good and tough bronco, and ready for a week's solid campaigning.

SPRINGS AND GEYSERS.

What a host of them there are! More than 4,000 springs and 100 geysers! They are scattered all through the park, on mountain sides, in valleys, among the trees, by the sides of streams, along the roads. They are large and small, round and oblong, with cones and without, and the hues of the water in some of the springs almost put the rainbow and sunset to shame.

Pearl Geyser, Norris Geyser Basin.



Norris Geyser Basin and Gallatin Range.

The divisional line between a hot spring and a geyser is not very clearly defined, even to the scientific man. Mr. Arnold Hague of the United States Geological Survey states that "a geyser may be defined as a hot spring throwing with intermittent action a column of water and steam into the air." A geyser of infrequent periodicity may long be mistaken for a spring. This was the case with Excelsior, the greatest geyser in the world. Its period of inaction is a long one, many years, and when not in eruption it is simply an enormous, sluggishly boiling spring.

The Black Growler, a steam geyser, Norris Geyser Basin.

There are two kinds of springs, not counting the paint pots and mud springs, in the park; one calcareous where the water carries

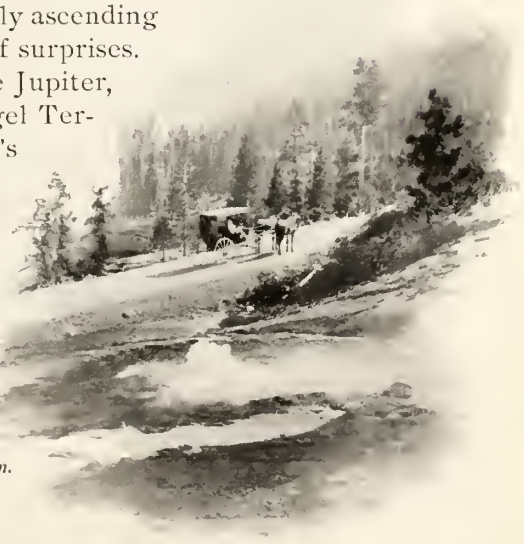
Great Fountain Geyser, Lower Geyser Basin, Evening.

carbonate of lime in solution, the other where it contains silica. There is a great difference between them, particularly in the mechanical results. In each the water is hot, beautiful beyond statement in color, sometimes boiling, perhaps continually, perhaps intermittently, in other cases quiescent.

The calcareous waters build terraces which, where alive, present remarkably striking fronts of many colors and wondrous stalactitic effects. Where the springs are dead the terrace cliffs die and then appear as deposits of so much old dirty rotten chalk. The springs at Mammoth Hot Springs are calcareous and cover a goodly portion of the eastern slope of Terrace Mountain. They are here seen in a variety of forms and expressions, and the pilgrimage among them, beginning at the bottom and slowly ascending the terrace stairs, is a never-ending succession of surprises.

The three principal spring terraces here are Jupiter, Minerva, and Cleopatra. Above them are Angel Terrace, Narrow Gauge Terrace, and the Elephant's Back.

Jupiter Spring is the largest and is undeniably the finest. Were there nothing else here, it alone would be enough to repay one for the time spent at this point. Minerva, this Minerva, is a fickle goddess. For the past



Beryl Spring and Road in Gibbon Cañon.

two or three seasons it has been entirely inactive and consequently its beauties have vanished. Another season it may be perfectly resplendent. To make amends, however, Cleopatra has decked herself out in robes much finer than ordinary, and a view from above looking down on it, presents a sight of splendor and magnificence.

At Angel Terrace one stops and admires to the full the satiny, beautiful, flowing tresses of travertine. At the Elephant's Back and Narrow Gauge Terrace, an entirely different type of terrace is shown.

Orange Geyser serves to show what is generally considered to be the process by which Liberty Cap and the Giant's Thumb, below Jupiter and Cleopatra terraces, were formed.

The most of the springs in the park are siliceous springs. The ordinary tourist cares little for this, however, as it is their superficial beauty that attracts him. The more conspicuous examples of these springs are Beryl Spring in Gibbon Cañon, the Sapphire, Morning Glory, Black Sand, Emerald, and Sunset Lake, at and near the Upper Basin. At Norris Basin there are one or two nice pools, and at Crater Hills, Chrome Spring, of sulphur, will excite enthusiasm. At Lower Geyser Basin there are a large number of springs and pools of various sizes and character. Firehole Lake, Surprise, Mushroom, and other pools are found near together here.

The geysers are of two kinds, those with and those without cones or elevated platforms and apertures. Of the latter the Monarch at Norris Basin, the two Fountains at Lower Basin, the Excelsior at Midway Basin, and the Oblong, Grand, and Giantess at Upper Basin are the more prominent. Of the cone geysers, the White Dome at Lower Basin, the Riverside, Grotto, Giant, Castle, Bee Hive and Old Faithful at the Upper Basin, and Lone Star Geyser, beyond the latter point, are illustrative.

The geysers are undoubtedly *the* distinctive feature of the park. They form a numerous, varied, amusing, and unique family. A description of one by no means answers for all, owing to the diversity of action in all ways. There is, for example, little similarity between Riverside and Old Faithful, the Grand and Castle, Bee Hive and Economic, Giantess and Cascade, Grotto and Lion, Daisy and Giant, all found at the Upper Basin. Each has its own individualities.

The geysers of the Fountain type eject the water in huge masses and by violent paroxysms; those like Old Faithful or the Grand send it forth in tapering columns which the wind plays with, thus adding beauty to the display.

A visitor to the park is certain to see several of the geysers in eruption. Their periodicity is, however, not absolute, and one may visit the park many times without happening to strike upon the time that some particular geyser is due to play. I had made five or six

Cone and Crater of Giant Geyser.

Tourists Watching Riverside Geyser.

Cone of Bee Hive Geyser.

Old Faithful Geyser.

The formation about Old Faithful.

Daisy Geyser.

At the Upper Geyser Basin.

visits to Upper Geyser Basin before I saw the Giantess in eruption. It was in 1899 that I enjoyed that never-to-be forgotten sight.

On the night of July 19th I occupied a room in Mr. Haynes' studio-cottage, and very early on the following morning a rapping on the window awakened me, and I was informed that the Giantess was in full eruption. Rushing out in my pajamas, I seated myself on a bench under the trees and watched the wonderful exhibition that was going on across the Firehole River. It was a spectacular sight. The entire basin seemed to be a steaming city, and the Giantess, after its usual fourteen days of quiescence, was now the central figure in a weird scene that made one think of witches and incantations.

The steam rolled up in prodigious masses, obscuring the heavier water column, except when the wind would, now and then, blow it away and disclose the latter. Higher and higher the white vapor rose, spreading out on all sides, and drifting with the wind into and over the tree tops on the mountains beyond the geyser. The thunder of the explosions could be plainly heard, like those of artillery. The display lasted for three-quarters of an hour, and then its intensity gradually lessened, until it became an eruption of steam entirely, and beautiful beyond description. The force with which the water and steam were shot forth was terrific.

The Giantess has a fashion of ceasing from its labors for a while and then beginning again, the first eruption being the most powerful. That day I saw it in eruption three times.

Immediately after breakfast, I hastened over to the geyser, at the time of its second inning. Its massive cistern, which the day before I had gazed upon as a deep, beautiful, hot pool, was completely emptied and the steam was now rushing out with deafening roar, from its vent far down—some thirty to forty feet—at the bottom of the pit. Out on the edges of the condensed vapor curtain, a large and exquisite rainbow steadily maintained itself. Later, another eruption occurred, where there was a larger proportion of water than at the second. The water was hurled out with great force to a height of from seventy-five to one hundred feet, and, spanning the cavern diagonally from rim to bottom, there was a tiny but beautiful rainbow. The rainbow is a feature of several geysers, notably Riverside.

The Giantess was most appropriately named, and although rather infrequent in operation, it makes up for this by the grand and terrible character of its eruption. Those who happen to see it in action may be accounted lucky.

GRAND CAÑON AND FALLS.

While it is true that the geysers are the most unusual of all that is seen in the park, it is equally true that the Grand Cañon impresses people the most profoundly. It is a wonderful spot—miles of con-

Grand Cañon at sunrise, looking east.

Grand Cañon of the Yellowstone.

centrated splendor. Its cliffs are not the highest, its length is not the greatest, its walls do not flare the widest of any cañon in the world, but as a congeries of extraordinary scenic elements it surpasses anything in the world.

At its head is a cataract nearly twice the height of Niagara. Not quite a mile back of that is another fall more than 100 feet high. Over the precipices found at these points the great river flowing from the big lake and the mountains beyond, plunges in two entirely dissimilar and majestic waterfalls. Either one of them if situated nearer to the centers of population would make the reputation of its locality. Placed where and as they are they add a strong and enduring feature to a locality already endued lavishly by nature, almost overloaded, in fact, with scenic richness.

The cañon itself, disassociated, if it were possible, from the falls, is a supremely perfect piece of creation. One might well employ all the adjectives in the vocabulary — and that they have all been so used by one or another it is no exaggeration to say — to describe it, and then the first exclamation that one would make upon standing on one of its jutting crags and overlooking the abyss for the first time would be, the half has not been told nor can it be. What then must be the effect with the addition of the two cataracts, and lying between them and at one side, a beautiful cascade, to the already matchless picture?

"The mind is overwhelmed with the grandeur and marvelous beauty of the scene, and completely captivated by the irresistible fascinations of the place," writes Rev. E. J. Stanley, one of its earliest explorers. "Here is where the wonders of the Yellowstone receive their crown of glory. To say that we can describe their grandeur and marvelous beauty, would be to assume to correctly portray the illuminated heavens," writes H. J. Norton. "Both of these cataracts deserve to be ranked among the great waterfalls of the continent. Every great cascade has a language and an idea peculiarly its own, embodied, as it were, in the flow of its waters. So the Upper Fall of the Yellowstone may be said to embody the idea of 'momentum,' and the Lower Fall of 'gravitation,'" wrote Lieutenant Doane. "In the sunlight of the morning the place is a blaze of strange color, such as one can hardly see anywhere save in the crater of an active volcano. But as the day wanes, the shades of evening sinking gently into the depths, blend their livid tints into a strange mysterious gloom," is the way Archibald Geike, the great English geologist, expressed it. Rudyard Kipling looked upon the scene once, and one of his observations was, "Evening crept through the pines that shadowed us, but the full glory of the day flamed in that cañon as we went out very cautiously to a jutting piece of rock — blood red or pink it was — that overhung the deepest deeps of all. Now I know what it is to sit enthroned amid the clouds of sunset."

A tremendous stimulant to fine rhetorical description, it will be noted, are these falls and cañon, and yet every one who has ever essayed the task frankly admits defeat in the attempt to do the subject justice.

Very wonderful and exuberant are some of these flights of rhetoric. Fact and exact statement are thrown wholly aside in some cases, and fancy and imagination are given free rein in a manner that "passeth understanding." And yet, every one who stands upon Lookout or Inspiration points, or who looks out upon that riotous sea of color and sculpture revealed at Grand View, understands thoroughly just how this happens; that it is indeed hard to tell the story in words of "truth and soberness."

The Lower Fall from south side of Cañon.

Let me now quote briefly from two of the most straightforward and praiseworthy descriptions I have seen in recent years. They are written by women, one from the big town of baked beans and brown bread on New England's shore, the other from the capital of that one of the galaxy of Northwestern States whose motto is "L'Etoile du Nord."

Miss Caroline T. Pillsbury of Boston, in *Boston Ideas*, pays this tribute to the spot:

"Well, the Grand Cañon really takes possession of us, soul and body — and, far from grudging its dominion, we gladly, adoringly, wonderingly throw ourselves with invigorant abandon into the welcoming arms of the atmosphere of silent grandeur that pervades the place, and know for once a restfulness born of the unconscious union consummated between man and his Maker through one of Nature's most obvious expressions of greatness. It is the one great climax of our trip — a climax upon whose pinnacle rests the radiant glory peculiar to magnificent silences, superb spaces, unspeakable infinity of color, with the royal beauty of the Creator's power fairly bursting into form and revealing the mighty love impregnating it all."

I like that, and do you wonder that some must needs go careering off into a sea of rhapsody when once fairly launched forth?

Miss Sarah A. Brooks, primary superintendent of the public schools of St. Paul, made a trip through the park in 1900 as the guest of the St. Paul *Dispatch*. Most of

Tourists Climbing in the Grand Cañon.

what she writes, that is purely descriptive of the park, is worth reproducing, but I have space for only the following brief excerpt anent the falls and cañon:

"Every view seemed the best view, revealing some new beauty of form or brilliancy of coloring. I shall not attempt to describe it. It is like describing heaven. One must behold to understand, and unless he has beheld, words can not convey a tithe of its magnificent beauty. One thing must be said: There could scarcely be an exaggeration of color in authentic pictures. Every color is represented, with shades and tints, it seems to the beholder, save blue, and that spans the yawning cavern in the blue arch of sky above. Warm springs sputter and hiss at the very foot of the Lower Fall, that splendid leap of crystal water, and every spring is a paint pot after its own design."

As it concerns the tourist, there are about four miles of this color symphony, although the cañon is twenty miles in length. Its greatest depth is 1,200 feet, not more. There is a fine road winding along the left brink from the head to Inspiration Point and Castle Ruins. The places that project out into the cañon have good trails leading to them and they are railed about so that there is absolute safety. There are innumerable views of the cañon to be had and no two alike. Truly, it is no exaggeration to state that, so far at least, no place of equal size has been discovered in the world that commands such wealth and fullness of grandeur as this. But, as Miss Brooks says, if you wish to *enjoy* and *understand* this spot of color and sculptural magnificence, you must go and see it yourself. No one else's eyes can see it for you, or *will* see it as your own do. And *you* must go to see it, it can not come to you. God placed it where it is, in the heart of the mountains; there it will stay for all time, and if you would see it, to it you yourself must journey.

One of Lewis and Clark's Men

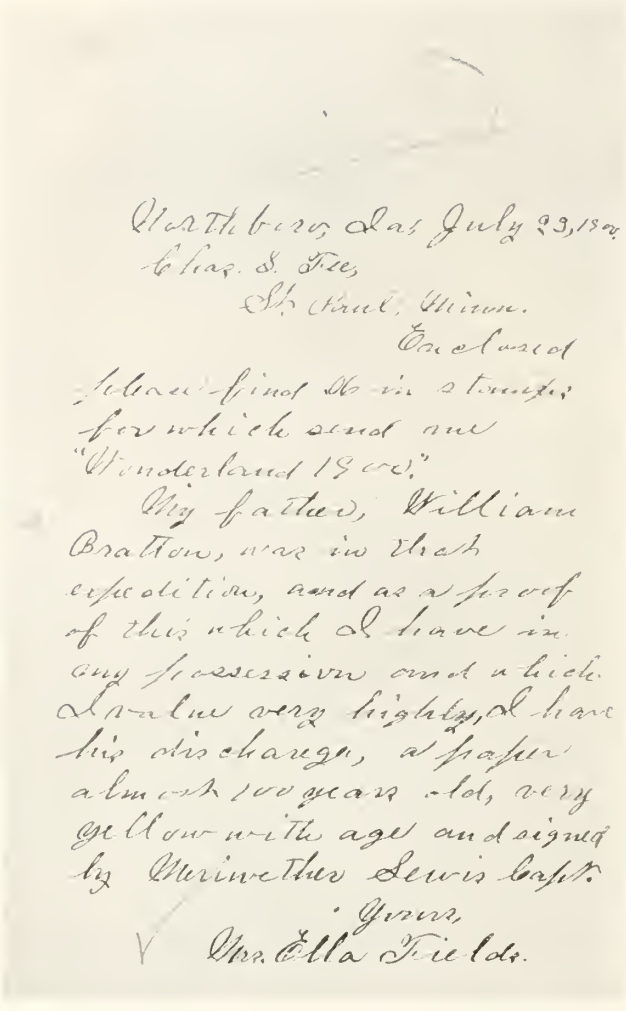
THE original letter, of which a facsimile is shown on the following page, office stamps and marks included, resulted in a correspondence between the writer and Mrs. Fields, and later with her son, Mr. J. T. Fields of Chillicothe, Mo., which developed facts considered worthy of publication and preservation.

"Wonderland 1900," published by the Northern Pacific Railway Company in 1900, had for its leading chapter, "On the Trail of Lewis and Clark." In the space allotted to that subject it was only possible to refer to some of the more important objects and adventures of that memorable expedition. An opportunity is now afforded, of not only chronicling to some extent the part borne by a worthy member of that immortal party, but, from his connection with some of the interesting episodes of it, to touch a little more in detail upon a few of those adventures. This will help us to comprehend more fully what those men endured, and how worthy they are of being embalmed in lasting and grateful memory.

Doctor Coues, in his complete work on Lewis and Clark, gives a roster of the expedition and, so far as known, brief statements concerning the individuals. Under the heading, "Privates (23)" on p. 254 (a footnote), the first name and notation is "William Bratton, Bratten, Brattin. No more known of him."

The different spellings given refer to the varied manner in which Lewis and Clark spell the name in their journal.

Of Bratton's earlier life, his descendants know little. He was born in 1778, in Augusta County, Virginia. He was bound out at an early age to a blacksmith, with whom he remained until he attained his majority, and he made use of the ordinary school facilities of the period. He was twenty-six years of age when he joined Lewis and Clark's expedition.


Northboro, Ia. July 23, 1900.
Chas. S. Fee,
St. Paul, Minn.
Enclosed
please find $6 in stamps
for which send me
"Wonderland 1900."
My father, William
Bratton, was in that
expedition, and as a proof
of this which I have in
my possession and which
I value very highly, I have
his discharge, a paper
almost 100 years old, very
yellow with age and signed
by Meriwether Lewis Capt.
Yours,
Mrs. Ella Fields.

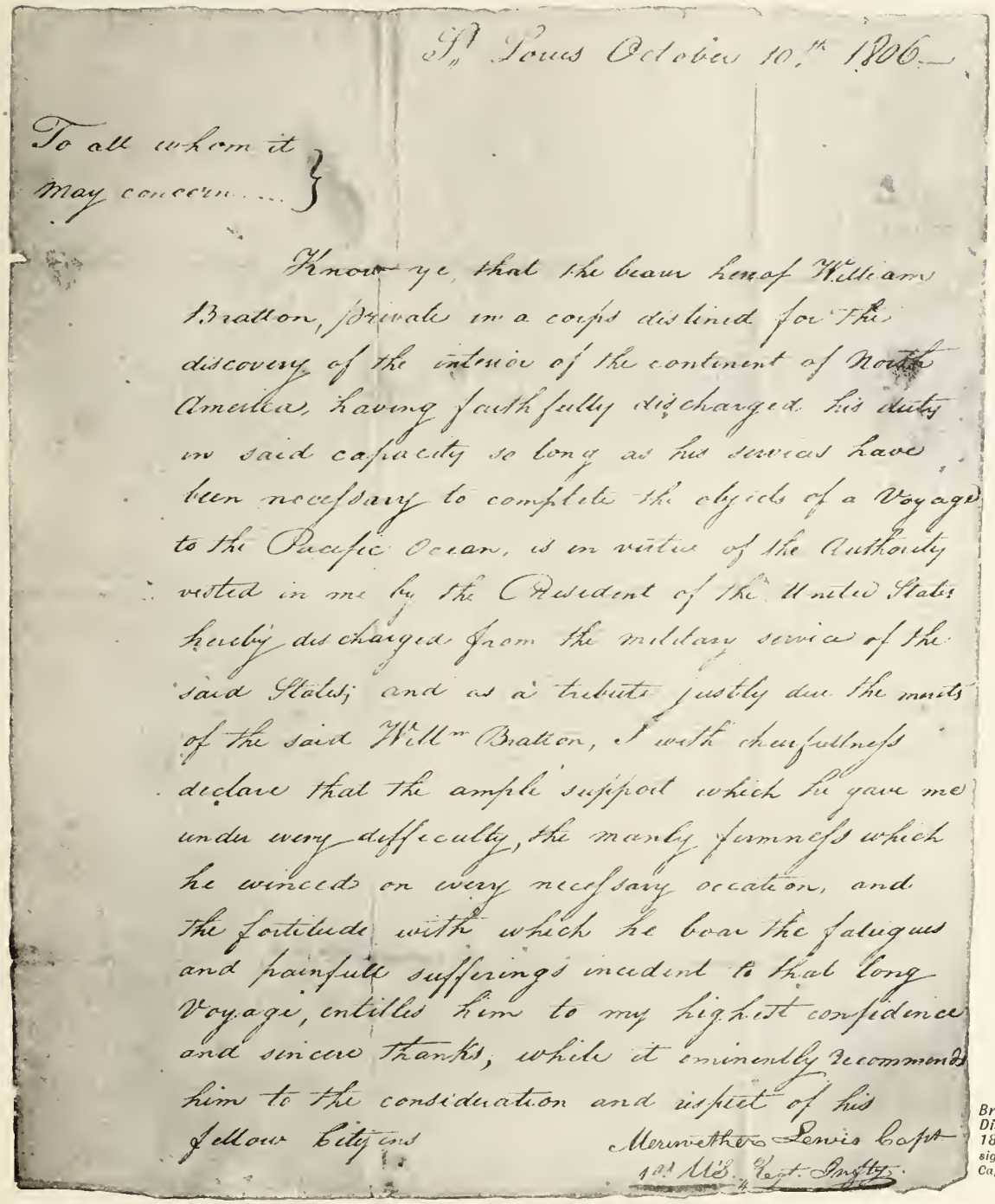
After his return from that exploration he lived in Kentucky, and he was near New Madrid, Mo., at the time of the great earthquake in 1811. He was a soldier in the War of 1812, serving under Gen. Wm. Henry Harrison, was in the battle of Tippecanoe, saw Tecumseh after he was slain, and was one of those surrendered by General Winchester at Frenchtown (now Monroe), Mich., in 1813. He was married in 1819, lived for a time at Bowling Green, Ky., then moved to near Terre Haute, Ind., was the father of eight sons and two daughters—Mrs. Fields being the only surviving child—died in 1841, and is buried at Waynetown, Montgomery County, Ind.

Bratton is not infrequently mentioned by Lewis and Clark, and seems to have been one of their best men. They named a creek and a river, both in Montana, after him, the former being apparently the second creek east of the mouth of the Musselshell River, on the north side of the Missouri River; the latter being what is now called Bridger River, or Creek, which flows into the Yellowstone River on the south side near Greycliff, on the Northern Pacific Railway. Lewis and Clark very properly honored nearly or quite all of their men by naming water courses after them, but few of those names survive, and the streams named for Bratton seem to have shared the common fate.

Those familiar with Lewis and Clark's journal know that Sergeant Floyd died on August 20, 1804, and was buried near where Sioux City, Iowa, now stands. The men of the expedition were allowed to select Floyd's successor, and Bratton was one of the three voted for, Gass being elected.

Bratton related to his family many of his adventures.

On August 4, 1804, one of the men, M. B. Reed, say Lewis and Clark, "Deserted and Stold a public Rifle, shot pouch, Powder and



St Louis October 10th 1806

To all whom it may concern

Know ye, that the bearer hereof William Bratton, private in a corps destined for the discovery of the interior of the continent of North America, having faithfully discharged his duty in said capacity so long as his services have been necessary to complete the objects of a Voyage to the Pacific Ocean, & in virtue of the Authority vested in me by the President of the United States hereby discharged from the military service of the said States; and as a tribute justly due the merits of the said Willm Bratton, I with cheerfulness declare that the ample support which he gave me under every difficulty, the manly firmness which he winced on every necessary occation, and the fortitude with which he bore the fatigues and painfull sufferings incident to that long Voyage, entitles him to my highest confidence and sincere thanks, while it eminently recommends him to the consideration and esteem of his fellow citizens

Meriwether Lewis Capt
1st Mis. Regt. Infty.

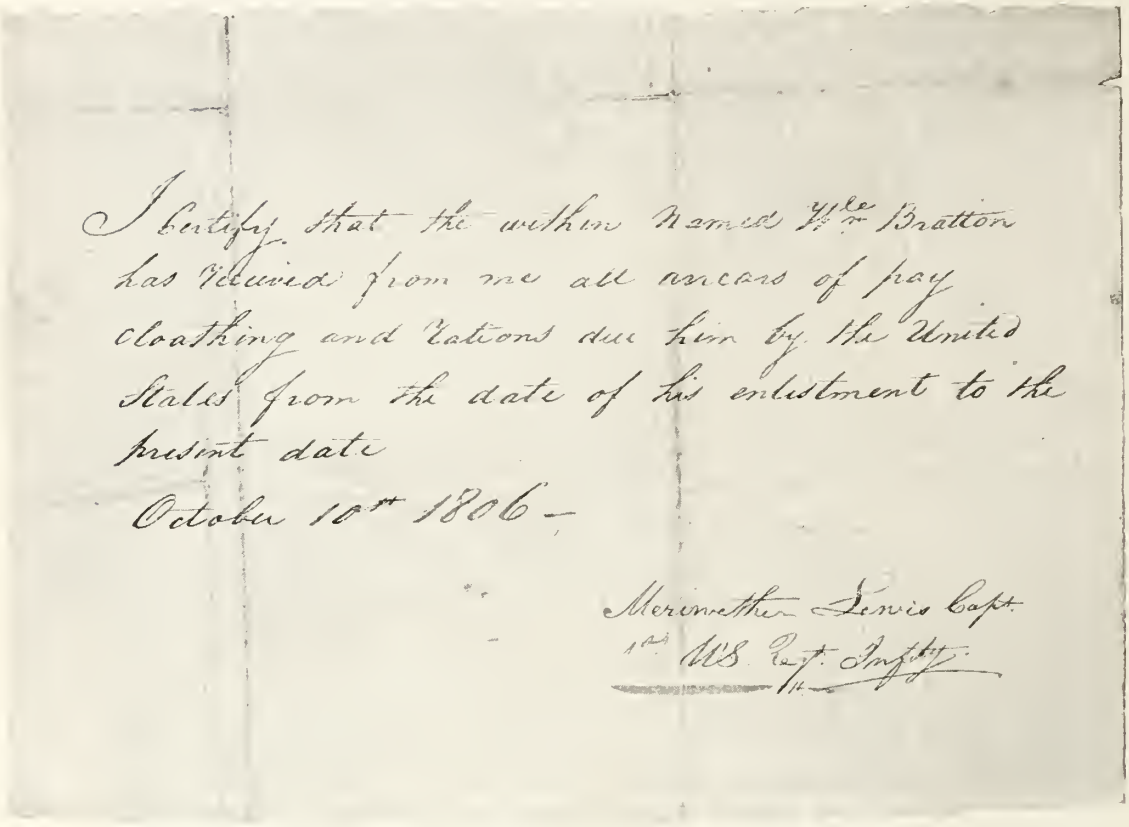
Bratton's Discharge, 1806, signed by Capt. Lewis.

Ball," and on August 7th, the leaders, "at 1 o'clock dispatched George Drewyer, R. Fields, Wm. Bratton and Wm. Labieche back after the Deserter Reed, with orders if he did not give up peaceably to put him to Death." They caught Reed, and Bratton stated that upon going

with the deserter to a stream to allow him to wash his moccasins, the latter made tentative propositions to be allowed to escape, but gave it up when Bratton informed him that if it was attempted, he would shoot him. Upon reaching the main party Reed was regularly punished.

At one point, after trading with the Indians, the latter, in large numbers, caught hold of the boats, when the party were about to depart, and not until the howitzers were turned upon them would they allow them to proceed.

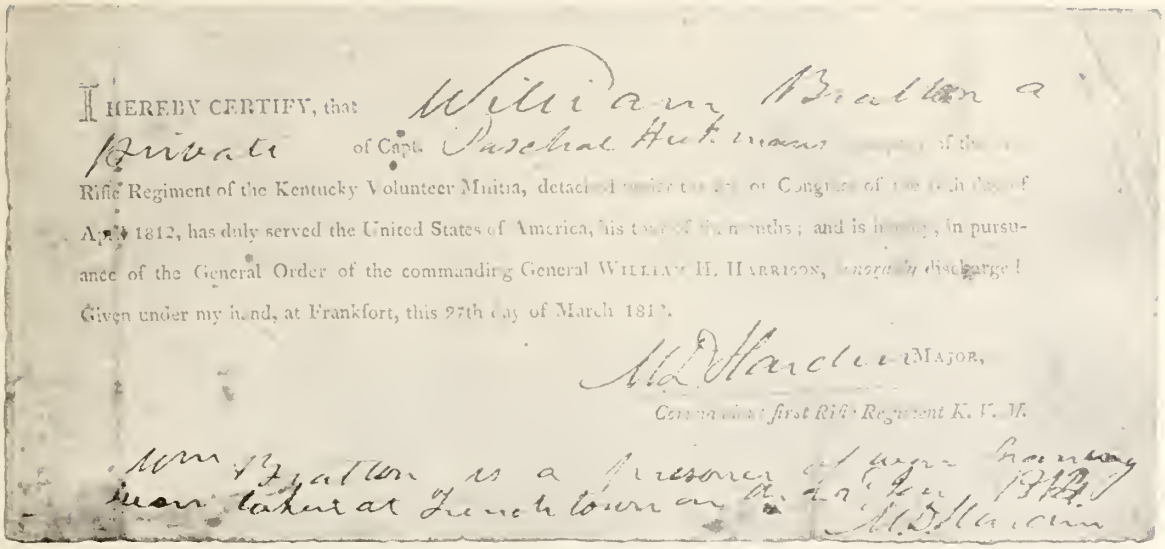
This incident is readily identifiable with the serious difficulties experienced by the expedition at and near the mouth of the Teton River, near the present town of Pierre, S. D., with the Teton Sioux Indians,


I Certify that the within Named Wm Bratton has Received from me all arrears of pay cloathing and Rations due him by the United States from the date of his enlistment to the present date
October 10th 1806
Meriwether Lewis Capt
1st US Regt Infty

Reverse of Bratton's Discharge, 1806.

when twice it appeared inevitable that they would be compelled to fire on the Indians, who, however, weakened at the critical moment each time.

It will be recalled that Lewis and Clark passed the winter of 1804-5 among the Mandan Indians, some fifty miles above the present towns of Bismarck and Mandan, N. D. The winter, a severely cold one, was passed in hunting over a wide scope of country. Much suffering was experienced, and Bratton seems to have borne his share in having his feet, fingers, and other portions of his body frozen. He was also one of those whom the bears, very savage in the region about the Great



I HEREBY CERTIFY, that William Bratton a private of Capt. Paschal Hutchinson [illegible] of the [illegible] Rifle Regiment of the Kentucky Volunteer Militia, detached [illegible] of Congress of the [illegible] day of April 1812, has duly served the United States of America, his tour of six months; and is hereby, in pursuance of the General Order of the commanding General WILLIAM H. HARRISON, honorably discharged! Given under my hand, at Frankfort, this 27th day of March 1813.

M. D. Hardin, MAJOR,
Commandant first Rifle Regiment K. V. M.

Wm Bratton is a prisoner of war having been taken at Frenchtown on [illegible] Jan 1813
M. D. Hardin

Bratton's Discharge, 1813.

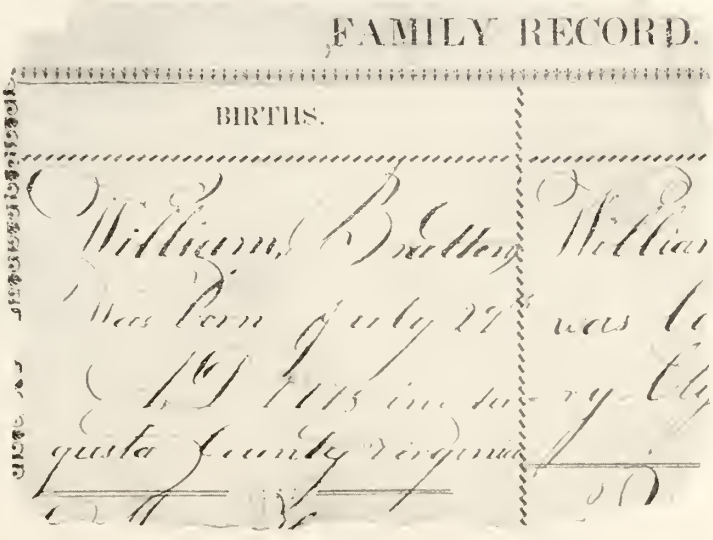
Falls of the Missouri River, seem to have delighted in running into trees and holding there as prisoners for long hours.

As Sergeant Floyd is noted as the only one of this expedition who died, so Bratton, one of the candidates for Floyd's position, stands out prominently as the only man who was seriously ill for a long time.

This experience he seems not to have related to his family, and as it was a rather remarkable one, I have picked it out from the records of the party as given by Doctor Coues.

When the expedition reached the Pacific Coast, Bratton was one of the five men sent to the seaside to evaporate the sea water in order to obtain a supply of salt.

The men left Fort Clatsop on December 28, 1805. On February 10, 1806, Bratton and Gibson were reported as quite sick, and on February 15th the men returned to Clatsop. Gibson had fever, and Bratton was suffering from lumbago, apparently. The journal of February 15th states, "Bratton is still weak and complains of lumbago, which pains him to move. We gave him barks," evidently, from what follows, a decoction made from the bark of some tree or trees and tonic in its nature. Then follow "Dr. Scott's pills" and, on March 7th, a good rubbing from a prepared liniment of alcohol, camphor, castile soap, and laudanum. The latter benefited the patient considerably for a time, but he again grew weaker, so that on March 21st, two days before the return



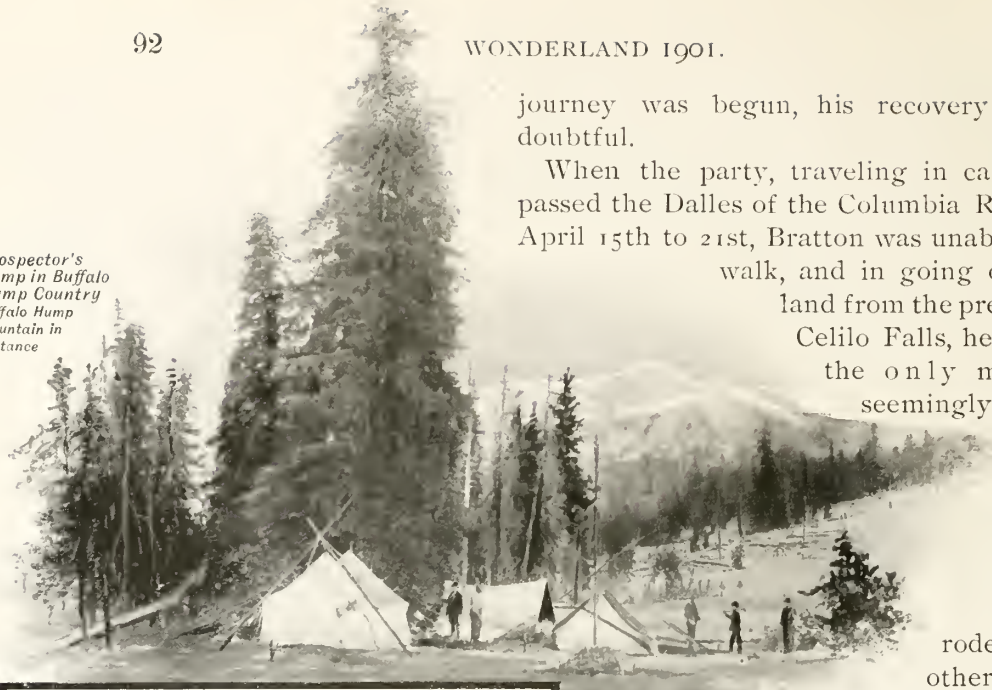
FAMILY RECORD.

BIRTHS.

William Bratton was born July 27th [illegible] in Augusta County Virginia

William was [illegible]

Record of Bratton's Birth, Written by Himself.



Prospector's Camp in Buffalo Hump Country Buffalo Hump Mountain in distance

journey was begun, his recovery was doubtful.

When the party, traveling in canoes, passed the Dalles of the Columbia River, April 15th to 21st, Bratton was unable to walk, and in going overland from the present Celilo Falls, he was the only man, seemingly, who rode, the others going afoot because of scarcity of horses. He made the trip successfully to Camp Chopunnish on the Clearwater River. This point was near the mouth of the present Lawyer's Cañon Creek, and the party's route up the Clearwater has since been followed by the Northern Pacific, its Clearwater branch extending from Lewiston up to and beyond the point reached by Lewis and Clark.

Elk City, Idaho. In heart of Buffalo Hump Country.

Bratton regained his flesh but not his strength, and finally heroic treatment was decided upon, and, as it was a terrible ordeal, one borrowed from the medical practice of the Indians and remarkable, in this case, for its results, I transcribe from Lewis and Clark's journal their own account of it:

"Besides administering medical relief to the Indians we are obliged to devote much of our time to the care of our own invalids. The child of Sacajaweah [an Indian squaw who made the perilous journey with Lewis and Clark and proved of great value to them] is very unwell; and with one of the men [Bratton] we have ventured an experiment of a very robust nature. He has been for some time sick, but has now recovered his flesh, eats heartily and digests well, but has so great a weakness in the loins that he can not walk or sit upright without extreme pain. After we had, in vain, exhausted the resources of our art, one of the hunters [Shields] mentioned that he had known persons

in similar situations to be restored by violent sweats, and at the request of the patient we permitted the remedy to be applied. For this purpose a hole about four feet deep and three in diameter was dug in the earth, and heated well by a large fire in the bottom of it. The fire was then taken out and an arch formed over the hole by means of willow poles, and covered with several blankets so as to make a perfect awning. The patient being stripped naked, was seated under this on a bench, with a piece of board for his feet, and with a jug of water sprinkled the bottom and sides of the hole, so as to keep up as hot a steam as he could bear. After remaining twenty minutes in this situation, he was taken out, immediately plunged twice in cold water, and brought back to the hole, where he resumed the vapor bath. During all this time he drank copiously a strong infusion of horse mint, which was used as a substitute for seneca root, which our informant said he had seen employed on these occasions. * * * At the end of three-quarters of an hour he was again withdrawn from the hole, carefully wrapped, and suffered to cool gradually. This operation was performed yesterday; this morning he walked about and is nearly free from pain."

This kill or cure process seems to have effectually cured, for Bratton rapidly recovered, and was soon able to perform his regular duties.

Ranch in Clearwater Valley, Idaho.

View of Salmon River, Idaho, from State Bridge.

On the Clearwater River above Lewiston.

His illness extended over a period of about four months, the first mention of it being February 10, 1806, and the last, June 5, 1806, but no permanent ill effects seem to have resulted.

The region where this experiment was ventured upon was then

Main Street, Lewiston, Idaho. Lewiston is the metropolis of the Clearwater Country.

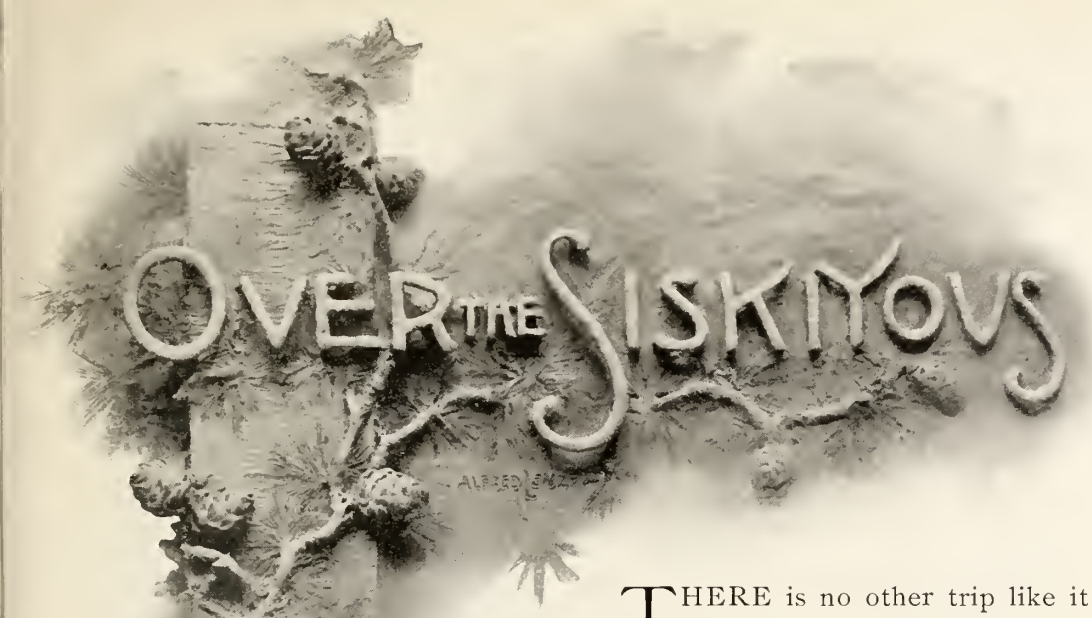
Monument over remains of Wm. Bratton, Waynetown, Ind.

and is now the home of the Nez Percé Indians, and, until comparatively recent years, has scarcely known the white man. The advent of the railway is changing all this. The valley of the Clearwater and the Camas Prairie country, hard by Lewis and Clark's Camp Chopunnish, is a remarkably fertile and easily tilled section, and is rapidly being occupied by white men; while farther south the well-known Buffalo Hump mining region bids fair to become noted even among phenomenal mining camps. On the return journey, after crossing the Bitter Root Mountains, Bratton formed one of Captain Clark's party down the Jefferson and Yellowstone rivers, and he thus explored in 1806 the route along which the Northern Pacific laid its rails nearly eighty years later.

No portrait of Bratton is extant. It will be noted that his connection with Lewis and Clark's expedition is recounted on his monument.

It will at once be admitted that Bratton gave a full quota of service to his country, and now, when another historian shall recount the story of Lewis and Clark and their men, it will not be necessary to place after Bratton's name the words "no more known of him."

The E in Bratton's name on the monument is evidently an error. His descendants so maintain and are ignorant as to how it happened to be placed there.



THERE is no other trip like it in this country. Whether you go south from Portland or north from San Francisco, you are equally transfixed with astonishment and admiration. If I *had* to select the one or the other direction, I think it would be to go south from Portland. If the great army of winter tourists from the East, who winter in Southern California, knew of the wonderful scenery of Northern California, Oregon, and Washington, there would be little halting between two opinions — the Shasta-Northern Pacific route would be used by ninety-nine out of every hundred on their return home.

The Siskiyou — a queer yet attractive Indian name, isn't it? — Range is one of several subranges that occupy the short interval between the Sierra Nevada and Cascade ranges proper. The whole region is one that abounds in fine scenery. It is also a paradise for large game and for mountain trout. The country is sparsely settled, finely timbered, well watered, full of profound gorges and quiet valleys, and that the people of California and Oregon appreciate the wild beauty found here is shown by the fact that all along the Shasta Route through the mountains, there are resorts of one sort and another for tourists, campers, etc.

The carrying of the rails across the Siskiyou Range afforded a fine chance to display the possibilities of civil engineering. For a long time the engineer was baffled, but at length the obstacles were overcome. There was much good country in California and in Oregon on either side of the Siskiyous, and in the early days San Francisco was the important and only city, practically, of the coast, and communication across the mountains was slow and difficult. A railway became a

necessity. Now Portland, Tacoma, and Seattle are large cities to the remote north, while Salem, Albany, Eugene, Roseburg, Grant's Pass, and Ashland are flourishing smaller cities nearer the range. The ascent, going south, is begun in the Upper Rogue River Valley. The train is a long one, hauled by two or three engines, with open observation cars at the rear in the summer season. The speed is not more than ten or twelve miles an hour; one can easily talk in his usual tone of voice, and there is lots of time for sight-seeing.

As the train climbs the flank of the range, the valley below gradually unrolls and reveals a scene rarely found. I don't think anyone ever gazed upon it without being profoundly affected. Its soft, natural curves and lines are just enough broken by the accessories of civilization to accentuate and render it tremendously impressive. Then comes the wildness of the mountains; the valley is shut out; the track and

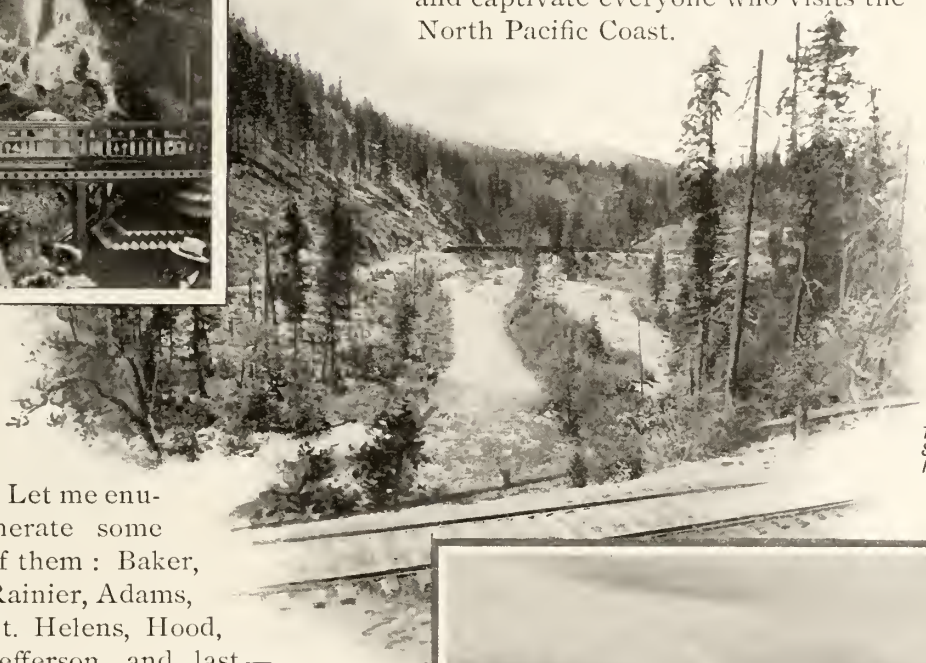
Mount Shasta by Moonlight.

train twist along the steep flank; a few wild and rugged ravines are crossed on strong trestles; a few short tunnels, one or two of considerable curvature, add variety; prominent points are seen here one moment, there at another; and all the time we are slowly rising higher, higher, among the pines and beautiful madroña trees. We shift position from one side of the car to the other. Now we look up at the rough, jagged sides of the range, again glance down far beneath us and see two lines of shining rails, one below the other, and wonder if we have just come over them.

Then the summit and its tunnel are reached. A moment in darkness, and we emerge on the other side, the wheels click a little faster and we clatter down the mountain out of Oregon into California, with the engines holding back as hard as they tugged forward a few

At Shasta Springs. A fountain of natural soda water.

moments before. Scarcely have we cleared the tunnel's cavern before there bursts on the vision, far away to the south and left, a huge, white, domelike orb full of brightness, grandeur, majesty, and dignity. "What is it?" escapes from each lip. Some one familiar with the region responds, "Shasta," and so it is, the last one, going south, of that magnificent coterie of ice-covered peaks which charm and captivate everyone who visits the North Pacific Coast.



The Upper Sacramento River.

Let me enumerate some of them: Baker, Rainier, Adams, St. Helens, Hood, Jefferson, and last — Shasta! There are others, here and there, but these are the great monarchs, ranging from 9,750 feet elevation for St. Helens, to 14,350 for Shasta, and 14,532 for Rainier.

The Siskiyous and Rogue River Valley with storm sweeping over them.

Shasta stands as a mighty recluse, robed about with an immaculate white toga woven from the mists of the ocean. The whole realm of mountain and valley bows humbly before this colossus. As the train somewhat swiftly speeds down the mountain in long, sweeping spirals, we keep the giant constantly in view. We have the vision before us all the afternoon, and as we drop to lower elevations and approach nearer and nearer to it, the height and magnificence of the spectacle grows on us.

Shasta is one of the fine things of the passage across the Siskiyous, and the first glimpse of it from near the tunnel will never be forgotten, should one live for a thousand years. The whole scene is entrancing. The green-black forests, which in tremendous surges sweep up to where they meet the snow and glaciers, form a most conspicuous foreground or foundation for the white head and shoulders that commune with the clouds above.

When the Klamath River is reached, the Siskiyous are behind us, and new and varied beauties of river and mountain are before us. It is a wonderful journey, no part of which is finer than the crossing of the Siskiyous.

Going north from San Francisco the picture is, of course, practically the reverse of the one given.

First comes the ravishing scenery along the Upper Sacramento River, a stream too little known, and one of the purest, crystal mountain streams in the world. Chief of the glories of the Sacramento are the great granite crags, known as Castle Crags, noted far and wide on the Pacific Coast. I have thought many times that description of these was almost a hopeless task. They are *so* fine and impressive, rising so high above you in their clean, gray, cold, and august austerity that it seems almost sacrilege to write about them. One must see, *see*, SEE them; then one may know them. As the train slowly swings along at the base of them, the rippling river on the other side of the track, it seems as if they must break forth into speech; but a deep, lasting silence is theirs. Could they but talk, what stories of border warfare and hardship they could tell!

Until the autumn of 1900 a splendid hotel was located at Castle Crags, but fire destroyed it. As a camping spot, however, the place is a perfect one.

Beyond Castle Crags there follow rapidly other places, and particularly to be noted is Shasta Springs. Be ready to hasten to the fine spring when the train stops, and quaff the best soda water you ever tasted. Fill a bottle of it to enjoy when you are again rolling onward.

The climbing from the cañon to the realms above is a wonderful climb, from both an engineering and a scenic standpoint. Once out of the cañon Black Butte comes into view, and Shasta, and finally the Siskiyous themselves.

SORT of strange that at this late day, away up on the coast of Alaska on the sea beaches at Cape Nome and vicinity, the most remarkable placer, in many respects, of modern times should be discovered. Somebody must have rubbed Aladdin's lamp and the genii appeared and piloted to the spot some poor disheartened prospector who had proved himself worthy of success. For years the tides of ocean there had ebbed and flowed, moaning in monotonous rhythm, "Why don't they come? Why don't they come?"

"All things come to him who waits," they say, even, it seems, to old ocean itself, and now the monotone of the surges is: "They have come! They have come!" Day after day, the once quiet beaches have now been turned topsy-turvy by men washing out the precious yellow grains. Quite different, this, from hard mountain-climbing among the gulches and hills where the ore has to be obtained by digging or blasting.

Verily, our old ideas of Alaska as a refrigerated, inhospitable region only will have to be changed.

We paid $7,200,000 for this glacial land, and we have received from it to date certainly as much as $120,000,000. And Congress higgled and haggled over the question as to whether we should buy it.

Cape Nome is a point on the north side of Norton Sound, about 125 miles beyond St. Michaels, the point of departure for the Yukon River steamers, and about 2,700 miles from Puget Sound. It is, therefore,

Mouth of Snake River, Nome, Alaska, looking west.

Front Street, Nome, Alaska.

Interior of Miners' Hut, Nome, Alaska.

N. P. Ry. Office, Nome, Alaska.

Views at Nome, Alaska.

Beach at Nome in Spring of 1900.

not so much out of the world as one would think. The first discovery — by accident, as usual — was in July, 1899. In three months those Nome beaches had given up $1,000,000. Along the coast northward the sands are more or less filled with gold, at many places being supposed to be as rich as those at Nome. This region is entirely within American boundary lines, and steamship communication with Puget Sound ports quite frequent.

Lighters coming in from ocean vessels to beach at Nome.

Climatic conditions are about the same as on the North Pacific coast, and clothing suitable to be worn there will answer for the Nome country.

The great significance of the Nome exploitation is in its probable effect upon the Alaskan region in general.

Alaska is probably only on the verge of its development. The land of gigantic glaciers is likely to prove a land of glittering gold as well.

Since the hegira consequent upon the Klondike discoveries great changes have come to Alaska. Little knots of prospectors have spread over it, searching out its hidden nooks and testing its ledges and streams for gold. The work is slow but the results will be valuable. Lines of railway, trails, and telegraph and telephone lines have been constructed. The Government is exploring the country, and is adding

Top of Muir Glacier. Seen by the Tourist on the Alaskan Trip.

to our knowledge of its topography and geology. All these things mean development, and every steamer that comes to Puget Sound from the far north comes freighted with prospectors and gold.

The hardy sons of men who are camping for a time up there are doing yeomen's work. It requires fortitude and strong hearts to develop such a land, but the ultimate results may be far greater than either they, or we, dream of. It will be found that all the ledges are not formed of gold quartz, nor all the streams of golden sands. But what has been found augurs well for the future.

Greek Church, Unalaska, Alaska.

There are now several lines of steamships between Puget Sound and Alaskan ports. The mere traveler and tourist may therefore make the pleasure trip to that region even

easier than heretofore, and gaze enraptured upon the grandest scenery of the globe, the great Alaskan mountains and their tremendous glaciers. Accommodations via these lines are entirely satisfactory, and reservations may be made through any Northern Pacific agent, east or west.

The excursion season extends from May 1st to September 30th. The steamers use the inland passage, thus avoiding the least sea sickness. Our Western Archipelago, as this is called, is destined to become one of the scenic and tourist resorts of the world. Tempered by the Japan Current, its coast climate is warm and moist, and at the feet of the great mountains and their glaciers is found a foliage almost or quite tropical in its luxuriance.

The glaciers break into the sea all along the coast, and a sight of the stupendous Muir Glacier, three miles wide, 250 feet in the air and 750 feet beneath the water, is one that can probably not be duplicated elsewhere.

The Alaskan Indians, with their curios, totem poles, quaint canoes, and primitive methods, form another interesting element in this tour of about 3,000 miles for the round trip.

Paradise Bay and Mount Emma, Alaska.

NORTHERN PACIFIC RAILWAY

Rates and Arrangements for the Tourist Season of 1901.

(SUBJECT TO CHANGE WITHOUT NOTICE.)

MINNESOTA SUMMER RESORTS

During the summer season the Northern Pacific Railway will sell round-trip excursion tickets from St. Paul or Minneapolis to Glenwood (Lake Minnewaska) at $5.25 ; Battle Lake, $7.50 ; Fergus Falls, $7.50 ; Pine River, $7.85 ; Backus, $8.35 ; Walker, $8.65 ; Bemidji, $10.10 ; Perham, $7.75 ; Detroit Lake, $9.15 ; Minnewaukan (Devil's Lake), $18.65 ; Winnipeg, $22.50. From Duluth to Deerwood, $3.80 ; Battle Lake, $7.50 ; Fergus Falls, $7.50; Pine River, $6.90; Backus, $6.90; Walker, $6.90; Bemidji, $6.90; Perham, $7.75 ; Detroit Lake, $9.15 ; Minnewaukan, $18.65 ; Winnipeg, $22.50. From Ashland, Wis., to Battle Lake, $9 ; Fergus Falls, $9 ; Pine River, $8.40 ; Backus, $8.40 ; Walker, $8.40 ; Bemidji, $8.40 ; Perham, $9.25 ; Detroit Lake, $10.65 ; Minnewaukan, $20.15 ; Winnipeg, $22.50. Good going to Minnesota resorts one day (from Ashland two days), to Minnewaukan (Devil's Lake) and Winnipeg two days from date of sale. Good to return on or before October 31st.

Round-trip summer excursion tickets will be sold from St. Paul, Minneapolis, or Stillwater to resorts on the "Duluth Short Line," as follows: Forest Lake, $1 ; Wyoming, $1.20 ; Chisago City, $1.45 ; Russell Beach, $1.55 ; Lindstrom, $1.55 ; Centre City, $1.60 ; Taylors Falls, $1.80 ; Rush City, $2.15 ; Pine City, $2.55. Tickets on sale daily ; limit, ten days. From St. Paul or Minneapolis to White Bear and return, 50 cents ; Bald Eagle or Dellwood and return, 55 cents ; Mahtomedi and return, 60 cents. Tickets on sale daily ; limit, thirty days. Summer excursion rates from St. Paul, Minneapolis, or Stillwater to White Bear Lake points or Bald Eagle and return, tickets on sale week days, going and returning on date of sale, 35 cents ; tickets on sale Sundays, going and returning on date of sale, 25 cents.

YELLOWSTONE PARK RATES

$5 TICKETS.— On sale at Livingston, Mont., June 14 to September 14, 1901, inclusive. The $5 ticket includes railway and stage fares Livingston to Mammoth Hot Springs and return.

$47.50 TICKETS.— A $47.50 round-trip ticket from St. Paul, Minneapolis, or Duluth to Livingston or Mammoth Hot Springs and return will be on sale at points named from June 12 until September 12, 1901, inclusive. Limit, good going thirty days, returning ten days ; final limit, forty days. The return portion of ticket must be signed and stamped at Livingston, Cinnabar, or Mammoth Hot Springs, and presented on train on or within one day of such date. Stop-over allowed within limit of ticket.

$49.50 TICKETS.— The $49.50 ticket includes railway and stage fares Livingston to Cinnabar and return, stage Cinnabar to Mammoth Hot Springs, Norris, Lower and Upper Geyser Basins, Yellowstone Lake, Grand Cañon, and Falls of the

Yellowstone and return, and five and one-half days' board at the Park Association hotels. On sale at Livingston June 14 to September 14, 1901, inclusive.

$44.50 RATE.— By payment of $22 at Mammoth Hot Springs Hotel to the cashier of the Yellowstone Park Association, and $22.50 to the manager of the Yellowstone National Park Transportation Company, having his office in this hotel, tourists not provided with regular Park tickets can secure transportation and hotel accommodations for the regular five and one-half days' tour.

Tourists who are not going west of Livingston should purchase the $47.50 tickets to Mammoth Hot Springs and return, as the round-trip rates to Livingston and Mammoth Hot Springs are the same, while the rate from Livingston through the Park and return is $5 higher than the rate from Mammoth Hot Springs.

$105 TICKET.— This ticket covers rail transportation from St. Paul, Minneapolis, Duluth, or the Superiors to Cinnabar, stage transportation Cinnabar to Mammoth Hot Springs, Lower Fountain and Upper Geyser Basins, Yellowstone Lake, Grand Cañon, Falls of the Yellowstone and Monida, six and one-quarter days' board and lodging between Cinnabar and Monida, and rail transportation from Monida, either via Oregon Short Line R. R. and Union Pacific to Missouri River points, or via O. S. L. R. R. to Ogden, any line Ogden to Denver, thence via either the B. & M. R. R. R., Union Pacific, A., T. & S. F. Ry., C., R. I. & P. Ry., or Missouri Pacific Railway to Missouri River terminals.

This ticket will be on sale June 12th to September 12th, inclusive, and will be limited to thirty days going to Mammoth Hot Springs and thirty days returning, with final limit of sixty days from date of sale.

$85 TICKET.— This ticket covers rail and stage transportation only (no meals or lodging being included therein) for the same tour as the $105 ticket. Limits, selling dates, and other conditions, except as noted, will be same as for $105 ticket.

For $3 extra, the $44.50, $49.50, $85, and $105 Park tours will be made to include steamboat ride on Yellowstone Lake, from the Thumb to Lake Hotel, via Dot Island.

The trip through the Park must be completed by September 19, 1901.

MONTANA, EASTERN WASHINGTON, AND EASTERN BRITISH COLUMBIA POINTS

The Northern Pacific Railway has on sale, at greatly reduced rates, round-trip excursion tickets from St. Paul, Minneapolis, or Duluth to Billings, Springdale, Livingston, and Bozeman, Mont.; Helena, Butte, and Anaconda, Mont. (choice of routes returning, via Northern Pacific or Great Northern Railway Lines); Missoula, Mont.; Spokane, Wash. (choice of routes returning, via Oregon Railway & Navigation Company and its connections, or via the Great Northern, or Northern Pacific Lines); Medical Lake, Pasco, Kennewick, and Toppenish, Wash.; Nelson, Trail, Rossland, Ainsworth, Kaslo, and Sandon, B. C., and Coulee City, North Yakima, and Ellensburg, Wash.

These tickets are of iron-clad signature form; require identification of purchaser at return starting point.

Any of the above tickets may read to return via Billings to the Missouri River, either direct or via Denver and any direct line except the Union Pacific Ry.

NORTH PACIFIC COAST EXCURSIONS

A $90 round-trip individual excursion ticket, St. Paul, Minneapolis, or Duluth to Tacoma, Portland, Seattle, New Whatcom, Vancouver, or Victoria, is on sale daily at points first named and by Eastern lines.

Tacoma, Seattle, New Whatcom, Victoria, Vancouver, or Portland tickets, at above rates, will be issued, going via Northern Pacific, returning via same route, or Great Northern, or Soo-Pacific to St. Paul, Minneapolis, or Duluth; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River, either direct or via Denver and any direct line except the Union Pacific Ry.; Portland tickets will also be issued, returning via Oregon R. R. & Navigation

Company and its connections to either Omaha or Kansas City, or to St. Paul via Sioux City.

Above tickets limited to nine months from date of sale, good, going trip, sixty days to any one of North Pacific Coast termini named, returning any time within final limit.

ALASKA EXCURSIONS

An excursion ticket will be sold from Eastern termini named to Sitka, Alaska, at $150, which rate includes meals and berth on the steamer. Tickets on sale May 1st to September 30th. Limit, nine months. Going to Tacoma, sixty days, returning within final limit, holder to leave Sitka on or before October 31st. Tickets will be issued to return either via the Northern Pacific, Soo-Pacific, or Great Northern lines to St. Paul or Minneapolis, or via Canadian Pacific Railway to Winnipeg or Port Arthur, or via Billings to the Missouri River, either direct or via Denver and any direct line except the Union Pacific Ry. Usual stop-over privileges granted. Steamer accommodations can be secured in advance by application to any of the agents named on appended list. Diagrams of steamers at office of General Passenger Agent at St. Paul. Steamers call at Glacier Bay during June, July, and August only.

CALIFORNIA EXCURSION RATES

The Northern Pacific Railway will sell round-trip excursion tickets from St. Paul, Minneapolis, or Duluth as follows:

To San Francisco, going via the Northern Pacific, Seattle, and steamer, or Portland and the Shasta Route, or the ocean to San Francisco; returning via rail or steamer to Portland, or via steamer to Seattle, and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis, or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings to the Missouri River, either direct or via Denver and any direct line except the Union Pacific Ry.; or via rail or steamer Portland and Huntington to the Missouri River; or returning by the southern lines to Council Bluffs, Omaha, Kansas City, Mineola, or Houston, at $103.50; to New Orleans or St. Louis, at $109.50.

To Los Angeles, going via Portland and Shasta Route, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Billings or Huntington to the Missouri River, at $122.50; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $113; to St. Louis, at $119.

To San Diego, going via Portland and rail through Los Angeles, and returning via rail, Portland and the Northern Pacific, Great Northern, or Soo-Pacific lines to St. Paul or Minneapolis; or via Canadian Pacific to Winnipeg or Port Arthur; or via Billings or Huntington to the Missouri River, at $129; or going via Portland and Shasta Route and returning via San Francisco and Ogden to Council Bluffs, Omaha, or Kansas City, at $119.50; to St. Louis, at $125.50.

Tickets via ocean include meals and berth on steamer.

At the eastern termini of the southern transcontinental lines excursion tickets will be sold, or orders exchanged, for tickets to San Francisco, returning via either the Shasta Route, the all-rail line to Portland, or the ocean and the Northern Pacific to St. Paul, Minneapolis, or Duluth, at a rate $13.50 higher than the current excursion rate in effect between Missouri River points, Mineola, or Houston and San Francisco. The steamship coupon includes first-class cabin passage and meals between San Francisco and Portland.

These excursion tickets allow nine months' time for the round trip; sixty days allowed for west-bound trip up to first Pacific Coast common point; return any time within final limit.

NOTE.—Double Daily transcontinental passenger train service commencing May 5, 1901. Reserve your accommodations on the "NORTH COAST LIMITED" — the most complete railway train in the country.

GENERAL AND DISTRICT PASSENGER AGENTS.

BOSTON, MASS.—279 Washington Street.
C. E. FOSTER ..... District Passenger Agent.

BUFFALO, N. Y.—215 Ellicott Square.
W. G. MASON ..... District Passenger Agent.

BUTTE, MONT.—Cor. Park and Main Streets.
W. H. MERRIMAN ..... General Agent.

CHICAGO—208 South Clark Street.
F. H. FOGARTY ..... General Agent.
C. A. MATTHEWS ..... District Passenger Agent.

CINCINNATI, OHIO—40 East Fourth Street.
J. J. FERRY ..... District Passenger Agent.

DES MOINES, IOWA—503 West Locust Street.
GEO. D. ROGERS ..... District Passenger Agent.

DETROIT, MICH.—153 Jefferson Avenue.
W. H. WHITAKER ..... District Passenger Agent.

DULUTH, MINN.—332 West Superior Street.
J. O. DALZELL ..... General Agent.

HELENA, MONT.—Main and Grand Streets.
A. D. EDGAR ..... General Agent.

INDIANAPOLIS, IND.—42 Jackson Place.
J. E. TURNER ..... District Passenger Agent.

LOS ANGELES, CAL.—125 West Third Street.
C. E. JOHNSON ..... Traveling Passenger Agent.

MILWAUKEE, WIS.—Room 2, Mack Block, Cor. Wisconsin and East Water Streets.
CHAS. C. TROTT ..... District Passenger Agent.

MINNEAPOLIS, MINN.—19 Nicollet Block.
G. F. MCNEILL ..... City Ticket Agent.

MONTREAL, QUE.—116 St. Peter Street.
G. W. HARDISTY ..... District Passenger Agent.

NEW YORK CITY—319 Broadway.
W. F. MERSHON ..... General Agent Passenger Department.

PHILADELPHIA, PA.—711 Chestnut Street.
I. M. BORTLE ..... District Passenger Agent.

PITTSBURG, PA.—305 Park Building.
ED. C. SCHOEN ..... District Passenger Agent.

PORTLAND, ORE.—255 Morrison Street.
F. O'NEILL ..... District Passenger Agent.
E. L. RAYBURN ..... Traveling Passenger Agent.

SAN FRANCISCO, CAL.—647 Market Street.
T. C. STATELER ..... General Agent Passenger Department.

SEATTLE, WASH.—First Avenue and Yesler Way.
I. A. NADEAU ..... General Agent.

SPOKANE, WASH.—Riverside and Howard Streets.
JNO. W. HILL ..... General Agent.

ST. LOUIS, MO.—210 Commercial Building.
P. H. NOEL ..... District Passenger Agent.

ST. PAUL, MINN.—5th and Robert Streets.
O. VANDERBILT ..... City Ticket Agent.

ST. PAUL, MINN.—4th and Broadway.
HARRY W. SWEET ..... District Passenger Agent.

TACOMA, WASH.—925 Pacific Avenue.
A. TINLING ..... General Agent.

TORONTO, ONT.—No 6 King Street, West.
G. W. MCCASKEY ..... District Passenger Agent.

VANCOUVER, B. C.—419 Hastings Street.
J. O. MCMULLEN ..... General Agent.

VICTORIA, B. C.
G. A. LEITHNER ..... General Agent.

WEST SUPERIOR, WIS.—821 Tower Avenue.
F. C. JACKSON ..... Assistant General Agent.

WINNIPEG, MAN.—(Depot.)
H. SWINFORD ..... General Agent.

PORTLAND, ORE.—255 Morrison Street.
A. D. CHARLTON ..... Assistant General Passenger Agent.

ST. PAUL, MINN.
A. M. CLELAND ..... Assistant General Passenger and Ticket Agent.
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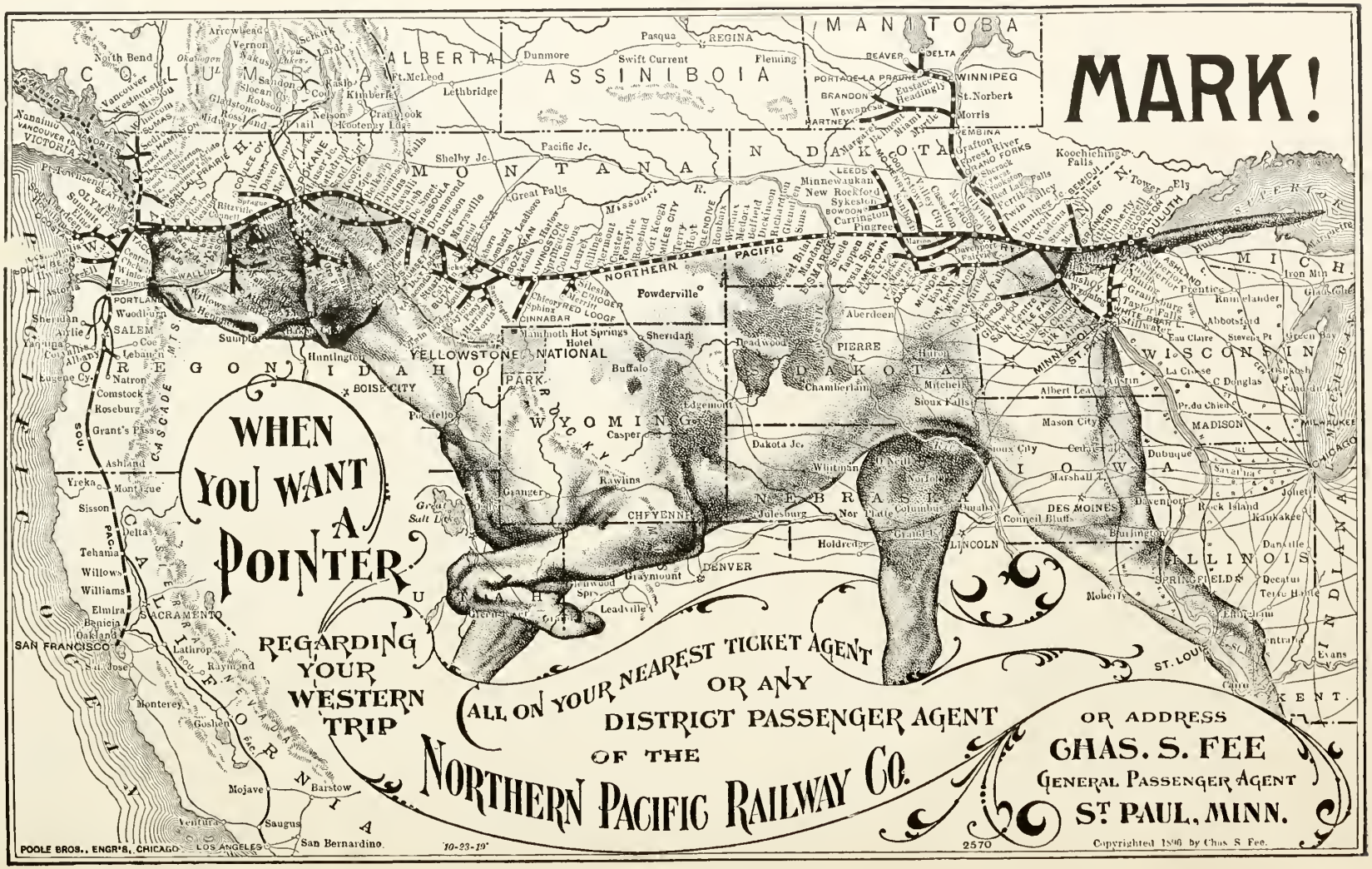
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